

Moral Intensity Revisited: Measuring the Benefit of Accounting Ethics Interventions

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Abstract The purpose of this study was to determine whether accounting students' perception of moral intensity could be enhanced through a limited ethics intervention in an Advanced Accounting course. Ethical decisions are heavily influenced by the intensity of the moral problem: the more egregious the act, the more the people view it as unethical. This controlled experiment measures the change in perceptions of moral intensity with the pre- and post-test instruments using five accounting specific vignettes containing moral dilemmas which are progressively more intense. While other studies have shown that perceived moral intensity directly influences a persons' moral decision-making process, as far as we are aware, this is the first study that assesses and tests whether the coverage of specific ethics content integrated into an accounting class can positively influence the students' perception of moral intensity, moral sensitivity/awareness, moral judgment, and moral intentions. Positively influencing students' moral sensitivity/awareness, moral judgment, and moral intentions is a critical first step to ensuring that our courses and curricula provide the learning environment in which students can develop knowledge and competencies required to become the ethical leaders of tomorrow.

Keywords Accounting ethics education · Moral intensity · Ethical decision making

Introduction

The accounting profession views 'Integrity' as the virtue that all members must live and breathe, and it is referenced in many places in the AICPA code of professional conduct (2015). The profession has been deemed the keepers of the public trust, and as such, each of its members must be of the highest moral character. Unfortunately, as history has shown, living up to that responsibility is incredibly difficult. Accounting scandals have rocked the profession for many years. When scandals occur, the integrity of the entire profession is brought into question as well as the integrity of the educational institutions which they graduate from. The Association to Advance Collegiate Schools of Business (AACSB) International issued a monograph titled Ethics Education in Business Schools stating the need to teach ethical awareness, ethical reasoning skills, and core ethical principles (AACSB International 2004a, b). Standard 15 mandates that business curricula include general knowledge and coverage of ethical understanding and reasoning abilities (AACSB International 2003); further, standard 37 indicates the accounting curriculum stems from the roles assumed by accountants in society of providing financial and other information and ensuring its integrity (AACSB International 2004a, b). If we are looking for a primary contributing cause of corporate malfeasance at firms such as Enron, Equity Funding, Worldcom, Sunbeam, Arthur Anderson, and HealthSouth, we need look no further than the classrooms of college and university accounting programs that have not significantly adapted their methods of instruction or approach to

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accounting and management education over the last 50–60 years (Russell and Smith 2003, p. 47). This sentiment is echoed by Ryan and Bisson (2011) who suggest that education is one of the only commonalities shared by those who commit fraud. The result has been over 40 years of research into accounting ethics looking at topics as varied as can ethics be taught, who should be teaching it, should ethics be taught in stand-alone courses or integrated throughout the curriculum, and what specifically should be taught (Miller et al. 2014). This study is focused on the latter. Bampton and Cowton (2013) call for accounting ethics education to move past the question of whether there is an impact and begin to determine the kinds of ethics interventions that work.

This research paper appears to be the first of its kind to utilize an empirically tested measurement of moral intensity to determine the effectiveness of an ethics intervention. Rest (1986) developed a four-stage model (moral sensitivity/awareness, moral judgment, moral intent, and moral behavior) of the ethical decision-making process. Rest's model suggests that for a person to actually behave ethically, they must first have the ability to recognize that an issue is morally problematic, critically evaluate the issue, and formulate an intention to act ethically. Rest's contention is that the actual ethical action will not occur without the presence of the first three steps: the three work together to culminate in ethical action. Prior research has explored Rest's four-stage model utilizing both the defining issues test and the multidimensional ethics scale, to measure ethical development, ethical sensitivity/awareness,¹ and intent (Cohen et al. 1996; Shawver and Sennetti 2009).

Unfortunately, the results of prior studies have been mixed with some studies finding similar ethical interventions to have positively impacted these measures, while others have not. Ritter (2006) found little impact from a short-term ethics training program, suggesting that accounting professors might not be willing, or have the ability, to integrate enough ethics into their curriculum. Student ethical and moral development has increased in some ethics intervention studies (e.g., Martinov-Bennie and Mladenovic 2013; Klimek and Wennell 2011; Shawver 2006; Armstrong 1993) but not in others (e.g., Earley and Kelly 2004; Shawver 2009; Poneman 1993; St. Pierre et al. 1990).

Dellaportas (2006) suggests that interventions of less than 3 weeks are usually ineffective; however, a discrete course in accounting with appropriately designed ethical

interventions can raise students' levels of moral development (Welton et al. 1994; Dellaportas 2006). There is some concern whether ethics interventions are persistent or transitory since the moral development of accounting practitioners may be affected by a socialization process within the profession and organizations (Welton and Guffey 2009). However, Welton and Guffey (2009) found that educators can positively influence the ethical values of their students, and if interventions are effectively designed, and the effect persists for at least a 3-year period.

Martinov-Bennie and Mladenovic (2013) explore the impact of providing an ethical framework alone and providing an ethical framework as part of a comprehensive integrated ethics education intervention on accounting students' ethical sensitivity and moral judgment. The study suggests that providing a framework alone does not increase students' ethical sensitivity but supports their ethical judgment. They found that the framework had a significant impact on students' ethical judgment, while integrated ethics education improves ethical sensitivity. Bernardi et al. (2002) found that programs that emphasize critical thinking may increase accounting students' moral reasoning. Korn (2013) suggests the challenge is to find ways to quantify the value added by ethics training. However, calls to determine the efficacy of specific methods are still being made. Interventions that impact ethical sensitivity/awareness may be critical as a foundation for development of moral judgment (Jagger 2011). To avoid the potential problems with previously used measures, we look toward another measurement to try and determine the effectiveness of what may positively impact the ethical decision-making process.

Hypotheses Development

Jones (1991) extended Rest's four component model of ethical decision making by focusing on the nature of the ethical situation itself and how it influences the ethical decision-making process. Jones proposed that the 'Moral Intensity' of any given morally problematic situation directly influences each of the components of Rest's ethical decision-making model. Moral intensity as defined by Jones (1991) includes six elements: magnitude of consequences, social consensus, probability of effect, temporal immediacy, concentration of effect, and proximity. The magnitude of the consequences reflects the amount of perceived harm or benefit of the act. Social consensus reflects the general societal view of a particular act as being ethical or not (social mores). Probability of effect reflects the likelihood that the act will actually take place and result in harm or benefit. Temporal immediacy reflects the perception of the amount of time between the act and the

¹ In the literature, moral sensitivity, ethical sensitivity, and ethical awareness are common terms used to describe step 1 in Rest's model. Ethical judgment and moral judgment are common terms to describe step 2 in Rest's model. Ethical intent and moral intent are common terms to describe step 3 in Rest's model.

consequences occurring. Concentration of effect is the perception of the number of parties impacted by the act. Proximity is the perception of how closely the decision maker is to related parties.

Jones (1991) theorized that the moral intensity of the problem directly influences each of the stages of Rest's ethical decision-making model. Jones (1991) proposed that a more morally intense situation would result in more people recognizing the issue as moral; and, as such, they would evaluate it more critically as a moral problem; resulting in an intention to act ethically; and, in the end, be more likely to behave ethically. Alternatively, issues which are less morally intense may never be recognized as morally problematic at all and therefore result in poor decisions being made. As a result, if you can influence how a person perceives an ethical issue, you can directly influence their decision-making process.

The research findings of Shawver and Shawver (2013); Shawver (2011); Clements and Shawver (2011); Yang and Wu (2009); Cohen and Martinov-Bennie (2006); Leitsch (2006); May and Pauli (2000); Dukerich et al. (2000); Frey (2000a, b); and Singhapakdi et al. (1996) all found that moral intensity is significantly related to each of the first three components of Rest's decision-making process: moral sensitivity/awareness, moral judgment, and moral intent, meaning that when people perceive issues as being more ethically charged than others (have a higher level of moral intensity), they more readily identify the ethical issues within them, more critically evaluate them from an ethical perspective, and ultimately display a higher level of intent to act ethically.

Cohen and Martinov-Bennie (2006), in their study of the perceived importance of the moral intensity factors by big four audit partners and managers, found that the six individual elements of moral intensity were important at each stage of Rest's ethical decision-making model. Magnitude of consequences was considered the most important factor, followed by societal consensus and probability of effect—while temporal immediacy was the least important. Further, their study found that the importance ratings and rankings differed among the three vignettes explored in their study. This provides support for Jones' (1991) contention that different situations will elicit moral intensity factor "weightings" that vary depending on the situation and the context of the moral issue. They also found that participant perception of the importance of magnitude of consequences and probability of effect grew in relation to rank and years of experience; suggesting that 'ethical cognition may be improved through formal recognition of and training using the Moral Intensity concept' (Cohen and Martinov-Bennie 2006). These findings provide not only further support for the use of moral intensity as measurement tool, but also show how one's sensitivity may be positively impacted by education.

While this would appear to be a natural extension of the literature surrounding moral intensity, there do not appear to be any studies which have tried to measure whether specific ethics education can positively impact how an accounting student perceives the moral intensity of an issue and thus impact their ethical sensitivity/awareness, moral judgment and intent (their ethical decision-making process).

Our study extends the research in the field by directly examining the change in student's perception of moral intensity between the beginning and end of a semester as well as changes to the first three components of Rest's moral decision-making process utilizing an empirically tested and supported measurement of moral intensity. As such, it appears to be the first of its kind to use the measurement of moral intensity in this manner. As a result, the following hypothesis will be investigated:

H1 Students' perception of moral intensity as a whole will increase as a result of the ethics intervention in their Advanced Accounting course.

As previously discussed, Jones (1991) posits that the moral intensity of an issue has a direct impact to each of the first three components of Rest's decision-making model: an increase in moral intensity should also result in an increase in sensitivity, judgment, and intent. His work has been supported through numerous empirical studies (Shawver and Shawver (2013); Shawver (2011); Clements and Shawver (2011); Yang and Wu 2009; Cohen and Martinov-Bennie 2006; Leitsch 2006; May and Pauli 2000; Dukerich et al. (2000); Frey (2000a, b); Singhapakdi et al. 1996). However, this link has not been tested from a standpoint of change in moral intensity resulting in a change in the individual components of Rest's model. As a result, the following hypotheses are also tested:

H2a Students will show an increase in their overall level of moral sensitivity/awareness as a result of the ethics intervention in their Advanced Accounting course.

H2b Students will show an increase in their overall level of Moral Judgment as a result of the ethics intervention in their Advanced Accounting course.

H2c Students will show an increase in their overall level of Moral Intent as a result of the ethics intervention in their Advanced Accounting course.

Methodology

Senior accounting students enrolled in an Advanced Accounting course at two medium-sized liberal education universities in the US were invited to participate in this study. Each of the students was within two semesters of

graduation. Each of the accounting programs are housed within AACSB-accredited colleges of business, and both integrate ethics content throughout their curriculum. Advanced financial accounting was chosen for this study to ensure that students would have a good understanding of intermediate financial accounting prior to being exposed to this ethics intervention. Neither institution requires a separate accounting ethics course be taken to qualify for graduation. Participation in this study was voluntary. Permission to conduct the study was granted, respectively, by both institutions Institutional Review Boards.

Ethics Intervention

Loeb (2012) identifies that ethics courses and modules in accounting degree programs and ethics-related continuing professional education programs promote knowledge of and conformity with accounting ethical standards. Advanced Accounting was chosen as the course to use because it is taken late in an accounting majors degree program (so the students should have the ability to evaluate the nuances of accounting-specific dilemmas) and as a required course covers the same content each semester (consolidations, multi-currency, governmental, not for profit, and partnership liquidations). Since the respondents came from two different universities, it was important that the courses contained the same content in order to be able to combine the results. The two professors, who each teach Advanced Accounting and have experience teaching accounting ethics, jointly designed an ethics intervention for their respective Advanced Accounting courses. The content was developed, tested, and improved over several years. They also compared curricular content of their respective courses to not only ensure that they were covering the same material, but that they would displace the same content with the content added surrounding ethics. They also agreed as to the amount of time they would devote to and the way in which they would assess the added material.

The exact content added was based on the recommendations of the AACSB's 2004 Ethics Education Task Force report which suggested that in order for ethics education to be effective, it must include foundational knowledge about ethics to enable the student to recognize ethical issues; a prescribed model for evaluating an ethical issue to promote the use of critical moral judgment in evaluation of an ethical issue; accounting profession specific standards; and related laws to provide clarity as to what the obligations of the profession are and the societal role it fulfils. Very few US accounting programs appear to include all the material called for in the AACSB task force report. In a study of US accounting programs at 97 universities from 44 states, Miller and Becker (2011) found that most programs have

very little coverage of ethical foundational topics including definitions, terminology, theory, and decision-making frameworks.

The AACSB report also suggests the use of active learning methods, like case study, as a way to help in the development of the students' ethical decision-making process.

The professors therefore agreed on the following content:

- (1) Ethical definitions and coverage of the three primary ethical genres: duties/rights-based (deontology/means), desires-based (teleology/consequence), and virtue-based (character) ethics. The above covered the work of Kant, Bentham, Aristotle and others.
- (2) Coverage of the role of accountants in society and the AICPA's professional standards and code of conduct. This coverage included discussing how the above fits within the three primary ethical genres.
- (3) Coverage of the relevant laws surrounding accounting, corporate governance, and financial reporting (Sarbanes–Oxley Act).
- (4) Coverage of the rules of the primary stock exchanges (compared to those contained within the Sarbanes–Oxley Act).
- (5) Introduction, discussion about, and use of two ethical decision-making frameworks: both Enomoto and Kramer's DIRR model (2007) which incorporates each of the three primary genres of ethical theories into their ethical decision-making framework; and Mintz and Morris's (2008) framework which emphasizes core values of and consequences to all stakeholders. This included the analysis and discussion of model cases (i.e., 'Cashing out at the Top,' Miller 2011) to learn how to apply the model to effectively analyze a case, in addition to furthering the students' understanding of the ethical content covered.
- (6) Individual-assessed assignments requiring the use of the above frameworks to analyze three real world cases: Arthur Anderson, Worldcom, and Enron.

Biggs (1999) suggests a foundational framework for achieving educational outcomes in higher education. Biggs identifies that learning outcomes should be aligned with learning activities. Assessment is the method that provides feedback to faculty and students about whether the learning objectives have been achieved. In Exhibit 1, we present how the above content and learning activities are linked to learning outcomes and the assessment of the impact of the ethics intervention. In Exhibit 2, we present the case analysis instructions and assessment rubric. The instructor evaluated each case analysis and randomly assigned each student a case to evaluate. This allows for each student to receive both instructor feedback and anonymous peer

Exhibit 1 Alignment of learning outcomes, activities and assessment

Learning outcomes	Learning activities	Measurement (assessment)
Provide common language and understanding (foundational knowledge) of how every decision we make is influenced to some degree by how we understand the context of a situation in relation to our duties/rights, desires and our own virtues (character)	Ethical definition and coverage of three primary ethical genre (duties/rights; desires; virtue)	<i>Moral sensitivity</i> measuring change in students' ability to recognize ethical issues as suggested by the AACSB. <i>Moral intensity</i> measuring change in students' ability to recognize ethical issues in less morally intense scenarios
Develop understanding of and appreciation for the unique role of accountants as keepers of the public trust in society and their responsibility to uphold the AICPA professional code of conduct and the specific rules and laws that exist	Role of accountants in society and coverage of the AICPA code of conduct. coverage of relevant laws surrounding the accounting profession, corporate governance and coverage of the rules of the primary stock exchanges and the coverage of and comparison to SOX financial reporting	<i>Moral sensitivity</i> measuring change in students' ability to recognize ethical issues as suggested by the AACSB. <i>Moral intensity</i> measuring change in students' ability to recognize ethical issues in less morally intense scenarios. <i>Moral intent</i> measuring change in students' intent to act ethically
Develop the students' ability to use critical moral judgment to analyze ethical issues	Coverage and application of two ethical decision making frameworks	<i>Moral judgment</i> measuring change in students' ability to critically analyze a morally problematic situation. <i>Moral intensity</i> measuring change in students' ability to recognize ethical issues in less morally intense scenarios
Increase the student's intent to act in an ethical manner	Individual cases assigned requiring the student to apply the above material utilizing the frameworks presented	<i>Moral judgment and moral intent</i> measuring change in students' ability to critically analyze a morally problematic situation and their intent to act ethically. <i>Moral intensity</i> measuring change in students' ability to recognize ethical issues in less morally intense scenarios

feedback for their individual case analysis. The same rubric was used by both the student and the instructor. To encourage students to provide fair and unbiased feedback, each student was instructed to use their student ID number in place of a student name on their case analysis.

The professors utilized approximately 20 % of the semester to cover the above: each used the exact same content and methods (lecture, discussion, group case work, and individual case work) to cover the above material.

The Measurement Instrument

Our controlled experiment consists of two instruments completed by each participant (one at the beginning of the semester and one at the end of the semester). The pre- and post-instruments were distributed in class, and students were instructed to return them to the instructor at the end of the class meeting. Extra credit amounting to less than 1 % of the total course available points was offered to students who successfully completed both the pre- and post-instruments. The students were asked to use the last four digits of their social security number on both the pre- and post-tests to enable the researchers to compare each student's pre- and post-responses yet maintain the students' anonymity.

One-hundred-twenty-seven senior accounting students were invited, who agreed to participate in this study

(100 % response rate). However, incomplete responses were eliminated from the study leaving a match-pairs sample of 110 students. Demographic questions were used to eliminate any students' responses from the results if they had previously or were concurrently enrolled in an accounting ethics course. The demographic characteristics of the respondents are reported in Table 1 and indicate that 65.5 % of the respondents are male, while 33.6 % are female. The respondents have an age range of 20–51 with an average age of 22.8 years.

Measurement of Change in Student Perceptions

The instrument used to measure the level of moral intensity consisted of five progressively more morally intense accounting scenarios (see Exhibit 2). All scenarios include some forms of earnings management (the first two following GAAP, delaying discretionary spending, and measurement of inventory obsolescence), and the next three violating GAAP in progressively more blatant and material ways (improper change in accounting method, improper capitalization of operating expenses, and choosing to not report customer product returns). In accordance with Jones (1991), the level of moral intensity should be higher the more morally problematic the scenario is. Given the nature

Exhibit 2 Case analysis instructions and assessment

Case Analyses Instructions: All case assignments must be typed. Timely completion of case study assignments is necessary to keep pace with the flow of coursework. Each Case must be analyzed including identification of the ethical issues, alternative actions, ethical evaluation (pros and cons) of the issue, and answer the questions following the case. Each analysis should be approximately 2 or 3 pages long. Failure to turn in assigned homework on time will affect your final course grade.

Be sure to turn the assignment into me in hard copy format by the date indicated.

Your case will be assessed based on the following criteria:

Advanced Financial Accounting		
Peer Assessment		
Case Evaluation		
	Name _____	
	Grading Scale: On a 10 -point scale, the individual is scored on the extent to which the criteria is met.	
	The scale is as follows: 10 meets or exceeds all expectations, 7-9 meets most expectations,	
	5-6 satisfactorily meets some expectations, 1-3 inadequately meets expectations, 0 does not meet expectations at all	
#	Assessment	Points
1	The student shall identify (recognize) the ethical issues in the case.	
2	The student shall evaluate the ethical issues.	
3	The student shall develop alternative solutions (what should have happened).	
4	The student will evaluate each possible alternative solution and the consequences of each.	
5	The student shall make a decision (best possible alternative solution).	
6	The student shall provide a clear, logical discussion of the topic.	
7	The student shall provide a buildup of logical facts to support their alternative solution.	
8	The student's research shall be accurate, thorough, and effectively organized.	
9	The student shall use good sentence structure, grammar, and professional wording.	
10	The student shall prepare a professional looking document using MS Word.	
	Total Score	
Constructive Comments:		

of these issues, some of them may not be viewed as containing any ethical issues at all. Leitsch (2006) states that the disparate nature of the scenarios is required to accurately measure the level of moral intensity.

Each scenario is followed by a set of six questions each measuring one of the six elements of moral intensity (see Exhibit 3). The questions used are based on Jones' (1991) study and previous research measuring the elements comprising moral intensity (Singhapakdi et al. 1996; May and Pauli 2000; Leitsch 2004, 2006; Yang and Wu 2009). Magnitude of consequences was measured by 'The overall

harm (if any) in completing this action would be small' (reversed-coded). Social consensus was measured by 'Most people would agree that completing this action is wrong.' Probability of effect was measured by 'There is a very small likelihood that this action will cause any harm' (reversed-coded). Temporal immediacy is measured by 'This action will not cause any harm in the immediate future' (reversed-coded). Concentration of effect is measured by 'This action will harm very few people if any' (reversed-coded). Lastly, proximity is measured by 'If the controller is a personal friend, the action is wrong.'

Exhibit 2 continued

1st Assignment: Read the “Worldcom” case and “Joe Berardino’s Fall from Grace”.

1. What ethical problems/issues that caused the accounting problems at Worldcom?
2. Is a growth-through acquisition strategy an accepted method to grow business?
3. What is the responsibility of the Worldcom’s board of directors?
4. Why do you think Berardino thought Anderson could 'handle the risks' of clients such as Worldcom?
5. How should Anderson's auditors dealt with Worldcom? Identify the possible alternatives and provide your opinion of the best possible alternative.

2nd Assignment: Read the Rise and Fall of Enron and respond to the following questions:

1. What ethical problems/issues that caused the collapse of Enron?
2. There are many groups that could be blamed for the collapse of Enron, who do you feel is most responsible?
3. How could the problems have been prevented? Identify the possible alternatives and provide your opinion of the best possible alternative.
4. Are accounting rules more important than accounting principles?

3rd Assignment: Corporate Governance Case. Think back to the Corporate Governance presentation today and respond to the following questions:

1. How could the Worldcom and Enron scandals been avoided from a corporate governance perspective?
2. What corporate governance mechanisms do you feel could have helped to avoid, mitigate, or discourage the unethical behaviors discussed today?
3. In your answer, you may discuss values based ethics, compliance based ethics, and whistleblowing or corporate governance programs to address the above question.
4. If faced with these situations, would you whistleblow? What factors would encourage you to whistleblow?
5. How important is your reputation? How important is the public interest?

Individual responses to each of the six questions on the pre- and post-instruments were used to measure moral intensity. The responses to each question and the differences pre and post are reported in Table 2. Then, the six questions measuring each item of moral intensity were averaged to generate a composite moral intensity score for each vignette. The pre- and post-test composite scores are reported in Table 3. The perceived intensity for each of the different items of moral intensity appeared to vary and increase, as expected. This progression from V1 to V5 supports Jones’ (1991) theory that accounting students view these scenarios as diverse situations, finding some to be more “morally intense” than others. In Exhibit 4, we

report the questions used in this study to measure each moral intensity item.

Measurement of Change in Rest’s Decision-Making Model Components

Using the same seven-point Likert scale as above (Strongly disagree to Strongly agree), three additional questions were used to measure change to the first three components of Rest’s ethical decision-making process. The questions are adapted from previous research regarding respondents’ moral sensitivity/awareness, moral judgment, and moral intent.

Moral sensitivity/awareness is measured by ‘The adjustment made by the staff accountant is ethical’ (Singhapakdi et al. 1996; Leitsch 2006). Moral judgment is measured by ‘The staff accountant should do the proposed action’ (May and Pauli 2000; Leitsch 2006). Moral intent was measured by ‘It is likely that I would complete the same action requested by the controller’ (Singhapakdi et al. 1996; Leitsch 2006; Shawver and Sennetti 2009).

Like with the measures for moral intensity discussed previously, individual responses to each of the four questions on the pre- and post-instruments were used to

determine the difference of each measure. The responses to each question and the differences pre and post were averaged to generate a total change for the three (out of four) components in Rest’s decision-making framework examined in this study. The responses to each question and the differences of pre- and post-tests are reported in Table 4.

Sensitivity Analysis

Since this research addresses ethical issues, this study uses the short version of the impression management (IM) scale to determine if the participants provided socially biased answers. IM occurs when an individual answers questions in a manner that deliberately under-reports socially undesirable acts and over-reports desirable acts. Paulhus (1991) developed the balanced inventory of desirable responding and the IM scale. The IM scale is a set of questions used to identify IM. These questions include statements such as “I always obey laws, even if I’m unlikely to get caught.” Each statement is rated on a seven-point Likert scale ranging from “not true” to “very true.” For this study, the pretest mean IM for males was 3.43 with a standard deviation of 2.26, and females scored 4.64 with a standard deviation of 2.38. Paulhus found typical scores for males to average 2.93 with a standard deviation of 2.80, and for females to average 3.21 with a standard deviation of 2.80. The scores for the females in this study are higher than the typical scores that Paulhus found; however, the male scores are not higher than typical. Since it is possible that individuals may wish to present themselves in a positive way, a fourth question was asked to measure intent. Izraeli (1988) identifies that ‘what peers do’ was the best predictor of an individual’s ethical behavior. To mitigate concerns over

Table 1 Sample demographics

	N	Percent of total
Panel A: gender of participants		
Gender		
Female	37	33.6
Male	72	65.5
Prefer not to answer	1	0.9
Total	110	
Panel B: political orientation of participants		
Political orientation		
Very liberal	2	1.8
Somewhat liberal	31	28.2
Neither liberal or conservative	24	21.8
Somewhat conservative	45	40.9
Very conservative	7	6.4
Prefer not to answer	1	0.9
Total	110	

Exhibit 3 Five vignettes evaluated by participants

Vignette 1 a staff accountant prepared the preliminary financial statements for the fourth quarter and sent it to the controller for approval. After review, the controller asked all managers to delay all discretionary spending hoping to increase reported net income by 3 %. The staff accountant agreed to delay discretionary spending based on the controller’s request

Vignette 2 a staff accountant prepared the annual schedule of estimated inventory obsolescence and sent it to the controller for approval. The controller asked that the staff accountant reduce the estimate and provided justification and disclosure for the change. The adjustment will result in a 2 % increase in reported net income, which allows this publically traded company to reach expected financial targets. The staff accountant agreed to make the adjustment

Vignette 3 a staff accountant prepared a schedule to calculate depreciation on production machinery and sent it to the controller for approval. The controller asked that the accountant change the depreciation method and increase the useful life of the production machinery without providing additional justification or disclosure for the change. The adjustment would result in a 3 % increase in reported net income for this publically traded company. The accountant agreed to make the adjustment

Vignette 4 a staff accountant prepared the preliminary financial statements for the fourth quarter and sent it to the controller for approval. After review, the controller asked the staff accountant to capitalize expenses for routine maintenance of production machinery. In the past, these costs were expensed. The adjustment would increase net income by 4 % for this publically traded company. The accountant agreed to make the adjustment

Vignette 5 a staff accountant prepared the preliminary financial statements for the fourth quarter and sent it to the controller for approval. After review, the controller asked that the accountant ignore all customer returns received during the last week of the fourth quarter in order to increase reported net income by 5 %. The accountant agreed to make adjustments to the financial statements and record these transactions in the first quarter of the next year

Table 2 Components of moral intensity pre and post test means

Components of moral intensity		Pre-Mean	Post Mean	Change Pre-post
Scenario 1: staff accountant agreed to controller's request to delay all discretionary spending				
MC	Magnitude of consequences	4.19	3.98	(0.21)
SC	Social consensus	4.65	4.70	0.05
PE	Probability of effect	4.21	4.09	(0.12)
TI	Temporal immediacy	4.33	4.06	(0.26)
PR	Proximity	4.00	4.29	0.29
CE	Concentration of effect	4.45	4.40	(0.05)
Scenario 2: staff accountant agreed to controller's supported and documented request to reduce the staff's estimate of obsolete inventory				
MC	Magnitude of consequences	4.34	4.41	0.07
SC	Social consensus	4.81	4.67	(0.14)
PE	Probability of effect	4.65	4.40	(0.25)
TI	Temporal immediacy	4.65	4.44	(0.22)
PR	Proximity	4.15	4.38	0.24
CE	Concentration of effect	4.75	4.51	(0.25)
Scenario 3: staff accountant agreed to controller's request to change depreciable life and method on production machinery with no support or disclosure				
MC	Magnitude of consequences	4.94	5.08	0.15
SC	Social consensus	5.36	5.43	0.06
PE	Probability of effect	4.96	5.18	0.22
TI	Temporal immediacy	4.83	5.00	0.17
PR	Proximity	4.71	5.11	0.40
CE	Concentration of effect	5.01	5.19	0.18
Scenario 4: staff accountant agreed to controller's request to modify fourth quarter financial statements to capitalize expenses for routine maintenance of machinery				
MC	Magnitude of consequences	4.72	5.10	0.38
SC	Social consensus	4.82	5.35	0.54
PE	Probability of effect	5.05	5.35	0.31
TI	Temporal immediacy	4.96	5.26	0.30
PR	Proximity	4.47	5.17	0.70
CE	Concentration of effect	5.01	5.29	0.28
Scenario 5: staff accountant agreed to controller's request to ignore customer returns delay recording them until the subsequent period				
MC	Magnitude of consequences	5.37	5.49	0.12
SC	Social consensus	5.65	5.74	0.09
PE	Probability of effect	5.37	5.45	0.08
TI	Temporal immediacy	5.25	5.59	0.34
PR	Proximity	4.85	5.20	0.35
CE	Concentration of effect	5.42	5.56	0.15

MC the overall harm (if any) in completing this action would be small (reverse coded), *SC* most people would agree that completing this action is wrong, *PE* there is a very small likelihood that this action will cause any harm (reverse coded), *TI* this action will not cause any harm in the immediate future (reverse coded), *PR* if the controller is a personal friend, the action is wrong, *CE* the action will harm very few people, if any (reverse coded)

possible social desirability response bias, we also examine whether one would have the moral intention to act, worded in the third person with the statement "It is likely that my peers would complete the same action."

This controlled experiment measured the responses of 110 senior undergraduate accounting majors (each within

two semesters of graduation) from two medium-sized liberal arts US universities. ANOVA confirms that there were no significant differences between the responses from these two educational institutions for the variables under study. Therefore, the responses from both universities were combined to complete all data analysis.

Results and Discussion

H1 hypothesizes that students' perception of moral intensity will increase as a result of an ethics intervention in their Advanced Accounting course. Table 3 presents the pre- and post-test composite moral intensity scores for each vignette. ANOVA results comparing the pre- and post-test composite moral intensity scores are not statistically different for V1 (pre-test $M = 4.30$, post-test $M = 4.25$, p value = .688) and V2 (pre-test $M = 4.56$, post-test $M = 4.47$, p value = .472). As previously discussed, this result was expected since ethics education may not result in a significant increase to students' perception of moral intensity for situations which have little or no moral intensity to start with. V1 involved a situation of delaying discretionary spending, while V2 involved reducing an estimate for inventory obsolescence with justification and disclosure for the change. Neither of these situations

violate the US GAAP and are unlikely to be considered morally problematic.

V3 involved changing the depreciation method and the useful life of the production machinery without justification or disclosure for the change. In V4, a controller asked the staff accountant to capitalize expenses for routine maintenance of production machinery. In V5, the staff accountant was asked to ignore all customer returns received during the last week of the fourth quarter in order to increase reported net income. V3–5 all violate the US GAAP and were interpreted as morally problematic with higher perceived moral intensity than V1 and V2. We find that an ethics intervention in an Advanced Accounting course made a difference in the perception of moral intensity for these morally problematic issues. ANOVA confirms the pre- and post-test composite moral intensity scores are statistically different for V3 (pre-test $M = 4.98$, post-test $M = 5.18$, p value = .040), V4 (pre-test

Table 3 Composite moral intensity pre and post test means

Vignettes	Pre-Mean	Post-Mean	Change Pre–post	p value
V1 composite moral intensity	4.30	4.25	(0.05)	0.688
V2 composite moral intensity	4.56	4.47	(0.09)	0.472
V3 composite moral intensity	4.98	5.18	0.20	0.040*
V4 composite moral intensity	4.82	5.24	0.42	0.001*
V5 composite moral intensity	5.32	5.51	0.19	0.042*
All scenarios composite moral intensity	4.79	4.92	0.13	0.050*

Composite moral intensity averages MC, SC, PE, TI, PR, and CE

Exhibit 4 Sample vignette questions

Vignette 1 a staff accountant prepared the preliminary financial statements for the fourth quarter and sent it to the controller for approval.

After review, the controller asked all managers to delay all discretionary spending hoping to increase reported net income by 3 %. The staff accountant agreed to delay discretionary spending based on the controller's request

Please indicate how strongly you agree or disagree with the following statements by circling one answer for each of the following statements using the following scale

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

The adjustment made by the staff accountant is ethical. (SA, Sensitivity/Awareness)

The staff accountant should do the proposed action. (J, Judgment)

It is likely that I would complete the same action requested by the controller. (I, Intent)

It is likely that my peers would complete the same action requested by the controller. (I, Intent (peers))

The overall harm (if any) in completing this action would be small. (MC, magnitude of consequences, reverse coded)

Most people would agree that completing this action is wrong. (SC, societal consensus)

There is a very small likelihood that this action will cause any harm. (PE, probability of effect, reverse coded)

This action will not cause any harm in the immediate future. (TI, temporal immediacy, reverse coded)

If the controller is a personal friend, the action is wrong. (PR, proximity)

The action will harm very few people, if any. (CE, concentration of effect, reverse coded)

*The items included in parentheses are for the benefit of the reader and were not included in the instrument

$M = 4.82$, post-test $M = 5.24$, p value = .001) and V5 (pre-test $M = 5.32$, post-test $M = 5.51$ and p value = .042). Therefore, H1 is supported.

H2a, H2b, and H2c respectively, hypothesize that students will show an increase in their overall level of moral sensitivity/awareness, moral judgment, and moral intent as a result of the ethics intervention in their Advanced Accounting course. Table 2 presents the pre- and post-test means for each individual measure of the moral sensitivity/awareness, moral judgment, and moral intent for each scenario, and a composite moral sensitivity/awareness, moral judgment, and moral intent scores of pre- and post-tests. Table 4 reports the ANOVA results comparing the pre- and

post-test composite moral sensitivity/awareness, moral judgment, and moral intent scores. For moral sensitivity/awareness, significant differences were found for V4 (p value .006) and the composite score (p value .037). For moral judgment, significant differences were found for V3 (p value .041), V4 (p value .005), V5 (p value .004), and the composite score (p value .004). For moral intent, significant differences were found for V1 (p value .004), V3 peers intent (p value .030), V4 (p value .002), V5 (p value .003), and the composite score (p value .001). These statistically significant results provide support for H2a–c.

The composite moral intensity reliability was assessed using Cronbach's coefficient α , a common measure used to

Table 4 Components of Rest's model pre and post test means

Components of Rest's model		Pre-Mean	Post-Mean	Change Pre–post	p value
Scenario 1: staff accountant agreed to controller's request to delay all discretionary spending					
SA	Sensitivity/awareness	3.436	3.255	(0.182)	0.330
J	Moral judgment	3.491	3.164	(0.327)	0.077
I	Moral intent	4.155	3.609	(0.545)	0.004*
I	Moral intent (peers)	4.682	4.355	(0.327)	0.048*
Scenario 2: staff accountant agreed to controller's supported and documented request to reduce the staff's estimate of obsolete inventory					
SA	Sensitivity/awareness	2.909	2.918	0.009	0.965
J	Moral judgment	3.064	3.136	0.073	0.715
I	Moral intent	3.382	3.236	(0.145)	0.497
I	Moral intent (peers)	3.836	3.936	0.100	0.599
Scenario 3: staff accountant agreed to controller's request to change depreciable life and method on production machinery with no support or disclosure					
SA	Sensitivity/awareness	2.136	1.955	(0.182)	0.229
J	Moral judgment	2.364	2.027	(0.336)	0.041*
I	Moral intent	2.345	2.200	(0.145)	0.364
I	Moral intent (peers)	2.982	2.664	(0.318)	0.030*
Scenario 4: staff accountant agreed to controller's request to modify fourth quarter financial statements to capitalize expenses for routine maintenance of machinery					
SA	Sensitivity/awareness	2.464	2.045	(0.418)	0.006*
J	Moral judgment	2.536	2.055	(0.482)	0.005*
I	Moral intent	2.718	2.164	(0.555)	0.002*
I	Moral intent (peers)	3.227	2.882	(0.345)	0.045*
Scenario 5: staff accountant agreed to controller's request to ignore customer returns delay recording them until the subsequent period					
SA	Sensitivity/awareness	1.673	1.482	(0.191)	0.113
J	Moral judgment	1.982	1.545	(0.436)	0.004*
I	Moral intent	2.055	1.627	(0.427)	0.003*
I	Moral intent (peers)	2.464	2.236	(0.227)	0.125
All scenarios composite score					
SA	Sensitivity/awareness	2.524	2.331	(0.193)	0.037*
J	Moral judgment	2.687	2.386	(0.302)	0.004*
I	Moral intent	2.931	2.567	(0.364)	0.001*
I	Moral intent (peers)	3.428	3.215	(0.214)	0.026*

SA the adjustment made by the staff accountant is ethical, J the staff accountant should do the proposed action, I it is likely that I would complete the same action requested by the controller, I (peers) it is likely that my peers would complete the same action requested by the controller

test the internal consistency among scales. Hair et al. (1998) suggest that a reliability of 0.70 or higher is acceptable for group research. Nunnally (1967) suggests a coefficient α of between 0.5 and 0.6 is acceptable for measures in the preliminary stages of development. In this study, the reliability analysis yielded acceptable Cronbach's α coefficients for all scenarios. The Cronbach's coefficient α for the pre-test scenarios were V1 .796, V2 .844, V3 .682, V4 .762, and V5 .735. The Cronbach's coefficient α s for the post-test scenarios were V1 .843, V2 .872, V3 .785, V4 .813, and V5 .819.

In Tables 5 and 6, we explore the impact ethics intervention has on the variables in this study by comparing the pre- and post-test correlation matrices for all of the variables. In a majority of situations, the Pearson correlation coefficients are higher after the ethics intervention compared to the same coefficients prior to the ethics intervention. There is a significant degree of intercorrelation between each step in Rest's moral decision-making process (moral awareness/sensitivity, judgment, and intentions) and the composite moral intensity score. Prior research also found significant correlations between the components of moral intensity and the decision-making process (May and Pauli 2000; Leitsch 2006). An increase in perceived moral intensity (closer to 7) correlates to a decrease in the moral sensitivity/awareness variable (closer to 1 unethical), judgment (closer to 1 unlikely the action should be completed), and intent (closer to 1 that the action would not be completed). This provides additional support that the relationship between moral intensity and the steps in the ethical decision-making process (awareness/sensitivity, moral judgment, and moral intention) is stronger after the ethics invention.

In Table 7, we further explore the impact ethics intervention has on the variables in this study. We compare pre- and post-test regressions for all of the variables in this study. In each regression model, the composite moral intensity score is entered as the independent variable. Each step in Rest's model is entered as a dependent variable. Regression analysis was conducted to evaluate the predictive power of the composite moral intensity on the accounting students' moral awareness/sensitivity. Consistent with Jones' (1991) theory, the results of these analyses suggest that the composite moral intensity is significantly related to moral awareness/sensitivity in all scenarios (all p values $<.05$). The predictive power of the models for V1, V2, and V4 increase after the ethics intervention. These results support H2a.

In order to further test H2b, regression analysis was conducted to evaluate the predictive power of the composite moral intensity on the accounting students' moral judgment. Consistent with Jones' (1991) theory, the results of these analyses suggests that the composite moral intensity is significantly related to moral judgment in all scenarios (all p values $<.05$) and the predictive power of the model increases in all scenarios after the ethics intervention supporting H2b.

In order to further test H2c, regression analysis was conducted to evaluate the predictive power of the composite moral intensity on the accounting students' intentions, measured directly as what they believe they would do, as well as indirectly as what they believe their peers would do. Consistent with Jones' (1991) theory, the results of these analyses suggest that the composite moral intensity is significantly related to moral intention in all scenarios (all p values $<.05$), and the predictive powers of the models

Table 5 Pre-test Pearson correlation coefficient comparisons with composite moral intensity

	V1	V2	V3	V4	V5
Sensitivity/awareness	-0.595**	-0.678**	-0.478**	-0.501**	-0.262**
Moral judgment	-0.620**	-0.594**	-0.325**	-0.398**	-0.262**
Moral intent	-0.510**	-0.560**	-0.478**	-0.537**	-0.410**
Moral intent (peers)	-0.341**	-0.469**	-0.328**	-0.355**	-0.281**

* Correlation is significant at the 0.05 level (two-tailed), ** correlation is significant at the 0.01 level (two-tailed)

Table 6 Post-test Pearson correlation coefficient comparisons with composite moral intensity

	V1	V2	V3	V4	V5
Sensitivity/awareness	-0.730**	-0.748**	-0.416**	-0.554**	-0.202*
Moral judgment	-0.764**	-0.696**	-0.470**	-0.660**	-0.480**
Moral intent	-0.680**	-0.741**	-0.361**	-0.641**	-0.441**
Moral intent (peers)	-0.501**	-0.608**	-0.310**	-0.399**	-0.371**

* Correlation is significant at the 0.05 level (two-tailed), ** correlation is significant at the 0.01 level (two-tailed)

Table 7 Regressions moral intensity and Rest's model of ethical decision-making

Independent variable: composite moral intensity for each vignette							
Components of Rest's model		Pre <i>t</i> value	Pre Sig.	Pre Adj R^2	Post <i>t</i> -value	Post Sig.	Post Adj R^2
Scenario 1: staff accountant agreed to controller's request to delay all discretionary spending							
SA	Sensitivity/awareness	(7.687)	.000*	0.348	(11.219)	.000*	0.534
J	Moral judgment	(8.213)	.000*	0.379	(12.167)	.000*	0.574
I	Moral intent	(6.156)	.000*	0.253	(9.633)	.000*	0.457
I	Moral intent (peers)	(3.766)	.001*	0.108	(6.019)	.000*	0.244
Scenario 2: staff accountant agreed to controller's supported and documented request to reduce the							
SA	Sensitivity/awareness	(9.587)	.000*	0.455	(11.708)	.000*	0.555
J	Moral judgment	(7.679)	.000*	0.347	(10.077)	.000*	0.480
I	Moral intent	(7.025)	.000*	0.307	(11.466)	.000*	0.545
I	Moral intent (peers)	(5.513)	.000*	0.212	(7.948)	.000*	0.363
Scenario 3: staff accountant agreed to controller's request to change depreciable life and method on							
SA	Sensitivity/awareness	(5.653)	.000*	0.221	(4.732)	.000*	0.165
J	Moral judgment	(3.575)	.001*	0.098	(5.511)	.000*	0.214
I	Moral intent	(5.653)	.000*	0.221	(4.003)	.000*	0.122
I	Moral intent (peers)	(3.602)	.006*	0.099	(3.369)	.001*	0.087
Scenario 4: staff accountant agreed to controller's request to modify fourth quarter financial statements to capitalize expenses for routine maintenance of machinery							
SA	Sensitivity/awareness	(6.009)	.000*	0.244	(6.892)	.000*	0.301
J	Moral judgment	(4.511)	.000*	0.151	(9.091)	.000*	0.430
I	Moral intent	(6.617)	.000*	0.282	(8.638)	.000*	0.405
I	Moral intent (peers)	(3.948)	.000*	0.118	(4.502)	.000*	0.151
Scenario 5: staff accountant agreed to controller's request to ignore customer returns delay recording							
SA	Sensitivity/awareness	(2.822)	.006*	0.060	(2.141)	.035*	0.032
J	Moral judgment	(2.817)	.006*	0.060	(5.689)	.000*	0.223
I	Moral intent	(4.667)	.000*	0.160	(5.112)	.000*	0.187
I	Moral intent (peers)	(3.048)	.003*	0.071	(4.158)	.000*	0.130

for V1, V2, V4, and V5 increase after the ethics intervention supporting H2c.

To summarize, in nearly all situations, the post-test regressions have higher *t*-values, higher adjusted R^2 , and the models are stronger after the ethics intervention compared to the same values prior to the ethics intervention. This suggests that after the ethics invention, moral intensity is more significantly related to moral awareness/sensitivity, moral judgment, and intention. In analyzing ethical issues, accountants often are trained to consider the materiality of an issue (magnitude of consequences). Accountants should also consider the other components of moral intensity when evaluating ethical dilemmas including the degree of social agreement (societal consensus); the probability that outcomes will fact happen (probability of effect), in the immediate or distant future (temporal immediacy); and the effects of the consequences on various stakeholders (proximity), including stakeholders that may be beyond those close to the situation (concentration of effect). The comparison of the effect of moral intensity on a pre- and

post-test basis suggests that gaining an understanding of moral intensity through an ethics intervention similar to the one completed in the Advanced Accounting courses under study creates a higher ethical awareness/sensitivity which may result in better judgments and intentions.

The use of multivariate regression analyses enables a simultaneous equations approach. In Table 8, we report the effect of the composite moral intensity score on the steps in Rest's model including: sensitivity/awareness (step 1), moral judgment (step 2), and moral intent (peers, step 3) with age, gender, IM score, and political orientation as covariates. At the beginning of the semester, moral intensity is statistically significant for sensitivity/awareness and judgment (steps 1 and 2 in Rest's model, *p* values .054 and .007, respectively), but not step 3. However, at the end of the semester, moral intensity becomes statistically significant for peers intent (step 3, *p* value .059), but is no longer statistically significant for steps 1 and 2. In much the same way that multi-colinear variables become less significant in the presence of more dominate ones in univariate models,

Table 8 Multivariate regression

	Type III sum of squares	Mean square	<i>F</i>	Sig.
Beginning of semester				
Independent variable: composite moral intensity				
Sensitivity/awareness	43.332	0.802	1.575	0.054*
Moral judgment	56.277	1.042	2.021	0.007*
Moral intent (peers)	53.080	0.983	1.313	0.168
Covariate: gender				
Sensitivity/awareness	0.078	0.078	0.154	0.696
Moral judgment	0.194	0.194	0.377	0.542
Moral intent (peers)	0.559	0.559	0.747	0.392
Covariate: age				
Sensitivity/awareness	0.067	0.067	0.131	0.719
Moral judgment	0.003	0.003	0.005	0.943
Moral intent (peers)	0.380	0.380	0.507	0.480
Covariate: impression management				
Sensitivity/awareness	0.011	0.011	0.022	0.882
Moral judgment	0.101	0.101	0.195	0.661
Moral intent (peers)	0.209	0.209	0.280	0.599
Covariate: political orientation				
Sensitivity/awareness	0.016	0.016	0.031	0.861
Moral judgment	0.155	0.155	0.301	0.586
Moral intent (peers)	1.215	1.215	1.622	0.209
a R^2 .671, Adj R^2 .281				
b R^2 .713, Adj R^2 .373				
c R^2 .605, Adj R^2 .136				
End of semester				
Independent variable: composite moral intensity				
Sensitivity/awareness	51.178	0.931	0.982	0.529
Moral judgment	55.534	1.010	1.102	0.370
Moral intent (peers)	76.089	1.383	1.569	0.059*
Covariate: gender				
Sensitivity/awareness	0.313	0.313	0.330	0.569
Moral judgment	0.336	0.336	0.367	0.548
Moral intent (peers)	0.945	0.945	1.072	0.306
Covariate: age				
Sensitivity/awareness	0.415	0.415	0.438	0.511
Moral judgment	0.723	0.723	0.788	0.379
Moral intent (peers)	0.033	0.033	0.037	0.848
Covariate: impression management				
Sensitivity/awareness	1.339	1.339	1.413	0.241
Moral judgment	0.561	0.561	0.612	0.438
Moral intent (peers)	1.101	1.101	1.249	0.270
Covariate: political orientation				
Sensitivity/awareness	1.585	1.585	1.672	0.202
Moral judgment	0.156	0.156	0.171	0.681
Moral intent (peers)	0.009	0.009	0.010	0.920
a R^2 .567, Adj R^2 .012				
b R^2 .588, Adj R^2 .060				
c R^2 .663, Adj R .230				

the composite moral intensity score becomes less statistically significant for steps 1 and 2 and more statistically significant for step 3 at the end of the course when the regressions are run simultaneously.

The practical implication of this finding is that in many instances, an individual may realize that a situation is morally intense and that recognition drives how one feels about the ethicality of an action (their moral sensitivity) and what one should do about it (their moral judgment); but, an individual may not necessarily choose to act (moral intent). We find that as a result of the coursework, improvement in perceptions of moral intensity has a greater impact on moral intent, i.e., students report that they are less likely to complete unethical actions because they recognize high morally intense situations after receiving ethics training. This can have a profound effect if this type of ethics training could be extended to professional settings. If the outcomes of formal ethics training are to encourage ethical intentions and discourage unethical intentions, ethics intervention similar to the one described in this study could have a substantial impact on society.

Ford and Richardson (1994) review the ethical-decision-making literature to identify variables that may influence ethical beliefs and decision making. Among the factors examined, the authors explored several demographic factors that are uniquely associated with the individual decision maker and those that are situational in nature (Ford and Richardson 1994). We control for the potential impact of three individual demographic variables including: gender, age, and IM (entered as co-variables). We find no differences for our sample of students based on age, gender, or IM for awareness/sensitivity, moral judgment, or moral intent (peers) for the multivariate models reported in Table 8 (all p values $>.05$).

Conclusions

The underlying rationale supporting ethics interventions is based on the premise that ethical awareness/sensitivity, moral judgment, moral intent, and an awareness of moral intensity can be enhanced through the educational process. In accounting, ethics interventions are often limited to auditing courses and a pedagogy that emphasizes the code of conduct (Armitage and Poyzer 2010; Miller and Becker 2011). This is the first study that attempts to measure a change in perceptions of moral intensity as a result of a prescribed ethics intervention, incorporating the curricular content recommendations of the 2004 AACSB task force, in an Advanced Accounting course. The module included foundational knowledge about ethics to enable the student to recognize ethical issues; a prescribed model for evaluating an ethical issue to promote the use of critical moral

judgment; accounting profession-specific standards, and related laws to provide clarity as to what the obligations of the profession are and the societal role it fulfills, and comprised 20 % of the course hours.

We acknowledge that curriculum time is a scarce resource, and producing materials to support an ethics intervention is time consuming. Further, the introduction of new material often means omitting course content from more traditional areas. The findings in this study demonstrate benefits of an accounting ethics education and give evidentiary support for the inclusion of ethics education embedded in an Advanced Accounting course. It is hoped that findings will encourage the integration of ethics in accounting courses. Ideally, ethics education should be taught as part of a broad-based program that includes three elements: (1) an introduction to ethical thought early in the degree program, (2) ethical discussion in existing accounting courses, and (3) a dedicated capstone course that ties together previous ethics material (Armstrong 1993). However, many programs do not offer a dedicated accounting ethics capstone course that ties together previous ethics material with the necessary tools that future accountants need to respond to ethical challenges. Further, prior research indicates that most accountancy chairs (Madison and Schmidt 2006) and accounting faculty (Blanthorne et al. 2007) preferred the integration approach to ethics rather than offering stand-alone classes. Although ethics education has increased substantially in the accounting curriculum, most accountancy chairs want to devote more time to ethics education (Madison and Schmidt 2006). For these educational institutions, this study demonstrates an opportunity to implement an ethics module into existing accounting courses and assess its effectiveness.

The results of this study can be extended to professional and organizational training. Continuing education and ethics training are required of certified accountants; therefore, ethics seminars, workshops, and specific case studies could be developed that focus on different types of unethical behavior, and the moral intensity of different problems, to improve the decision-making process that occurs in a business setting.

Limitations

Several limitations should also be noted. First, five hypothetical scenarios were used in this controlled experiment. Although, the use of hypothetical scenarios is common in ethics research, the results of this study may be different compared to the actual behavior in an organizational setting since we did not examine whether this ethics intervention is persistent. It is possible that responses to these situations could be different once these students are

socialized into the accounting profession or the organization in which they work. Another limitation is that moral intensity was narrowly defined within the context of each accounting situation. These components may be viewed as more or less intense depending upon the issue without the researchers detecting these differences.

Future Research

There are many opportunities for future research. Replication studies are needed to confirm these results since this is the first study of its kind. Future research could examine the dimensional nature of moral intensity, and instead of measuring moral intensity directly with a pre/post-test instrument, an experimental design could also be used. Students could be exposed to scenarios manipulating some or all of the components of moral intensity, and the differences in ethical sensitivity/awareness, moral judgments, or moral intentions could be observed. The ethics module used incorporated all the recommended components of the AACSB 2004 Ethics Education Taskforce; future studies could look to determine if any one component is more valuable than another, or if all are required. Liu et al. (2012) suggest that accounting ethics education shows deficiencies in terms of code-bound content, less-systematic formal training, less-informal hands-on training, and less usage of partnering in comparison to ethics education in medicine and law. These deficiencies identify opportunities for future research. For example, ethics education in accounting could explore opportunities to broaden students' view of responsibilities and ethical practice, implement more hands-on training, and partner with practitioners as a way to enhance what is learned in the classroom when ethics interventions are implemented. Future research could also examine whether the effectiveness of this ethics intervention is persistent after several years of practicing in accounting. We leave these opportunities for future research.

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