

ENGAGING INTERMEDIATE ACCOUNTING STUDENTS THROUGH ONLINE DISCUSSIONS ON THE ETHICAL DILEMMAS : AN EMPIRICAL STUDY

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Abstract

The study has a twofold purpose. First, it documents an experiential survey on teaching ethics in an intermediate accounting course at a middle-class public university in the U.S. Second, it empirically examines attending students' thoughts and perceptions on the experiential study. The study covers six experiments in five post-COVID semesters. A three-step approach is applied to experiential research. CANVAS online discussion tool is used as a teaching-learning platform. Two common goals of teaching ethics in accounting are initially set to be achieved. Through empirical analyses, the study examined whether financial reporting and accounting ethics are perceived as essential learning outcomes in intermediate accounting courses taught in an accounting undergraduate degree program. The findings encourage the inclusion of ethical dilemma cases in intermediate accounting course content at the college level of accounting education since students reflect on it positively. It could be an example of significant experience for business schools that do not have specific business or accounting ethics courses.

Keywords: Ethics education, the accounting profession, students' perceptions.

Jel code: M49

Note: The study has IRB approval

1. INTRODUCTION

Hurdman (1941:412) quoted "Ethics is the science of human duty; the basic principles of right action" as a dictionary definition of ethics derived from the ancient Greek word Ethos. As an inspiration, Hurdman (1941:412) quoted the medical profession's code of ethics based on the creed of Hippocrates: "A physician should be 'an upright man, instructed in the art of healing.' Consequently, he must keep himself pure in character and conform to a high standard of morals and must be diligent and conscientious in his studies. 'He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life." This can be extended to all professions that need human being's attitude, act, and behavior for providing services to clients. Thus, for all of professions code of ethics could be summarized as "acting in the manner your conscience tells you is the right."

The study has a twofold purpose. First, it documents an experiential study of teaching ethics in intermediate accounting courses at a middle-class public university in the U.S. Second, it empirically examines attending students' thoughts and perceptions on the experiential study. The study covers six experiments in five post-covid semesters. A three-step approach is applied to experiential research. CANVAS online discussion tool is used as a teaching-learning platform. Two common goals of teaching ethics in accounting are initially set to be achieved and mentioned in upcoming sections of the study. Through empirical analyses, the study examined whether accounting and reporting ethics are perceived as important learning outcomes in an intermediate accounting course taught in an accounting undergraduate program.



This study is organized in the following manner. First, the literature on the ethics of the accounting profession and teaching ethics in accounting programs is reviewed. Second, the objectives of the study, the method, and the data used for the empirical analyses are explained. Third, the statistical-empirical analyses to understand students' perceptions and thoughts on the study of teaching ethics in an intermediate accounting course are provided and examined. Finally, the findings and conclusions of the study are documented.

2. HISTORY OF CODE OF ETHICS FOR U.S. ACCOUNTANCY

In the United States, the accounting profession was inspired by medicine and law as older professions and followed the British and Scottish models. U.S. accountancy first attained professional status in the late 19th century. To distinguish itself from other business and commercial activities, a code of conduct that could set the accountant apart from the laity was sought in the early 20th century (Marquette, 1996:233). Sterrett (1907:409) stated that the Bar Association of Eleven States adopted a code of ethics in 1887, and the American Medical Association adopted the "*Principles of Medical Ethics*" on May 7, 1903. As a result of these developments of self-regulation in the professions, professional ethics discussions in U.S. accountancy occurred in the late first decade of the 20th century. The address of J.E. Sterrett (1907:407-431) at the annual meeting of the American Association of Public Accountants (AAPA) triggered the subject and outlined the agenda for future debate and development of a code of ethics for U.S. accountancy. The first discussions occurred during the AAPA's annual meeting in 1907 (Allen, 1907:97-99; Cooper, 1907:81-94; Montgomery, 1907:94-96).

In 1916, the AAPA became the American Institute of Accountants (AIA) which established the first comprehensive "*Code of Professional Ethics*" for the US accountancy in 1917 (Marquette, 1996:233) that lasted for about five decades.

Taeusch (1932:273) stated that business ethics became a socioeconomic phenomenon during the 1920s and mentioned that it had not been since the days of the medieval guild. Needs of business ethics as the formulation of "*codes of ethics*," and the establishment of "*practice committees*," appeared during those days. As a result of these developments, some books and articles (Heermance, 1926; Lee, 1926; Lord, 1926; Birdseye, 1926; Taeusch, 1926; Miller and Fletcher, 1930; Taeusch, 1931) on general business ethics were published and problems of business ethics and different phases of those were presented. Lecture series were also held nationwide (Vawter Lectures, 1930).

The AIA merged with the American Society of Certified Public Accountants (ASCPA) in 1959 to become the American Institute of Certified Public Accountants.

In 1965, T. Higgins, chairman of the AICPA Ethics Committee, addressed the annual meeting and triggered the discussion to revise the code of ethics (Marquette, 1996:233). Then a new restructured code of ethics (Higgins & Olson, 1972:33) for certified public accountants was accepted in 1973 and consists of the norms and values of the profession. As of 1970, thirty-three jurisdictions had such a requirement that CPA candidates write a separate examination in accounting ethics (Loeb & Bedingfield, 1972:811). Currently, about 35 state boards require CPA candidates to pass a course and take the Ethics Exam (cpaexam.com, 2023).

3. DEVELOPMENTS FOR TEACHING THE ETHICS OF ACCOUNTANCY

No doubt professions can suffer to continue effectively without a high standard of ethical conduct developed and maintained. Thus, the stakeholders of accountancy expect higher standards of conduct in the business world globally. Wilcox (1955:72) suggested that every



auditing student should be acquainted with the Code of Professional Ethics, also other accounting courses should cover it. Grimstad (1964:82) stated that the young professionals entering accountancy be imbued with a sense of professional responsibility and ethical propriety, and raised a question of what efforts should be made to teach ethics to accounting majors in the colleges (Mintz, 2021:24-31) that are the first and primary source of training for the profession.

There are scholarly studies on the importance of ethics education to the accounting profession. Some studies try to address the following questions:

- Can ethics be taught?
- How can ethics be taught?
- What role could colleges and universities play in teaching the code of ethics to students?
- What could be the goals of accounting ethics education?
- How and in which courses are accounting ethics taught?

3.1. Importance of Teaching Ethics in Accounting Programs

The first question above was far behind the discussion (Bok, 1976; Piper et al., 1993; Ponemon, 1993) decades ago. The demand for ethics education in accounting programs has been on the table for more than five decades. Grimstad (1964:82-83) raised some examples of medicine and law experiences and triggered teaching ethics in accounting education. Pellegrino et al. (1985:52) mentioned that many medical schools offer a course in ethics and citing a study Kelly (1980:2) indicated that many law schools require a course in professional ethics. In contrast, George (1987:516-517) asserted that a majority of responding schools do not have a specific course at either the undergraduate or graduate level in ethics required for students. On the other hand, at the beginning of the millennium, accounting scandals increased attention to the urgent (Park, 2022:3) and an overwhelming need to improve ethics in the accounting profession (Robinson et al., 2020:111) and consequently accounting education. Thus, practitioners and researchers increasingly advocated the ethical sensitivity of accounting students. White (2004:32) cited from Pricewaterhouse Coopers (2003:5) that "all business students must understand that personal integrity is not a choice; it is an obligation for those who serve the public interest." Armstrong et al. (2003:2) urged accounting researchers to explore ethical character and behavior.

3.2. Goals of Ethics Education in Accounting Curricula

The goals in the teaching of ethics were first outlined by Callahan (1980:61-74). Those were advocated by scholarly faculties for further research. Adapting those, Loeb (1988:320) made major contributions to the subject. Loeb's description of setting the goals of accounting ethics education has been a milestone for faculty and professionals studying in the field. Geary and Sims (1994: 5) used these goals in their study. Adkins and Radtke (2004:285-286) adapted those to study students' perspectives in an undergraduate environment. These goals were covered by some other studies as well (Graham, 2012:601) These are as follows:

- Relate accounting education to moral issues.
- Recognize issues in accounting that have ethical implications.
- Develop "a sense of moral obligation" or responsibility.
- Develop the abilities needed to deal with ethical conflicts or dilemmas.

- Learn to deal with the uncertainties of the accounting profession.
- "Set the stage for" a change in ethical behavior.
- Appreciate and understand the history and composition of all aspects of accounting ethics and their relationship to the general field of ethics.

Mintz (2016:29) argued the goals above "do not go far enough; ethical decision-making is necessary but insufficient to ensure ethical actions are taken." Thus, Mintz modified the goals and suggested that the revised goals of accounting ethics education should be as follows:

- To relate accounting education to moral issues.
- To recognize issues in accounting that have ethical implications.
- *Cultivate a sense of moral obligation to the public.*
- Develop moral reasoning skills to analyze ethical issues and deal with conflicts or dilemmas.
- Develop the ability to voice one's values to counteract reasons and rationalizations.
- Develop leadership skills to carry out ethical decisions with ethical actions.
- Reflect on one's actions.

3.3. How Should Ethics be Taught for Accounting Majors?

After understanding the goals of teaching ethics in accounting, the scholars discussed certain major issues (Loeb, 1988:322).

- 1. Should accounting ethics be taught throughout the accounting curriculum as a standalone course or in an accounting course? The first one is called a "pervasive method or instruction" by Grimstad (1964:84), May (1980:237), and Kelly (1980:50).
- 2. How to integrate ethics into the accounting curriculum? (Langenderfer and Rockness, 1989:58-69).
- 3. What teaching techniques, methods, or approaches should be used to achieve the goals of teaching accounting ethics?

Robinson et al. (2020:113) stated that there has been a debate about how to best incorporate ethics education into the accounting curriculum. Thomas (2004:28) stated that many academics prefer accounting ethics education to be realized in a separate course. Loeb (1998:235) mentioned that the research suggests a stand-alone ethics course could help to develop the ethical skills of accounting majors and provide more value to those. Armstrong (1993:77-92) suggested a "sandwich course" that consists of a general course in ethics followed by case study integration across certain accounting courses. Swanson (2005:247) suggested that accounting education programs have a separate ethics course and integrate ethics discussion in every accounting course.

Teaching ethics in accounting education is widely embedded in financial accounting and auditing courses, rather than a stand-alone course for ethics. Grimstad (1964:84) first suggested teaching ethics could be realized within financial and managerial accounting courses. Loeb and Rockness (1992:487) mentioned that teaching ethics in each accounting course could be the quickest way to expose the maximum number of students to ethics.

Cohen and Pant (1989:73) stated that 18% of the 145 responding schools required accounting majors to take a stand-alone ethics course at the undergraduate level. Madison and Schmidt (2006:99-109) surveyed 122 largest North American accounting programs and reported that 8.1% of AACSB-accredited and 16.67% of non-accredited schools required a stand-alone ethics course for accounting majors at the undergraduate level. Woo (2003:22-27) found out that around 90% of deans of AACSB (Association to Advance Collegiate Schools of Business) accredited business schools prefer to integrate ethics coverage into certain accounting courses. Hurtt and Thomas (2008:31-51) surveyed the best method of covering ethics in the accounting curriculum. They provided four choices and asked instructors' opinions. The choices were (*a*) *a separate course*, (*b*) *integration of ethics across the curriculum*, (*c*) *both a separate course and integration*, *or* (*d*) *other*. They found that 22% of the participants selected the first choice and 60% of those for the third choice. Similarly, in their research Madison and Schmidt (2006:107) indicated that 70% of the department chairs felt that ethics should be integrated into the accounting curriculum.

No doubt each method or approach has advantages and disadvantages for learning efficiency. On the other hand, the school's selection for the subject would be based on their capacity for ethics education. On the other hand, there has been a debate on the pedagogy of teaching ethics. There have been numerous methods or approaches to ethics education in accounting. White (2004:32) stated that traditional pedagogy where the professor lectures and students listen is viewed as inadequate and not relevant to effective learning that results in ethical attitude and behavior. Albrecht and Sack (2000:1-72) asserted that accounting education was not exposing students in the right ways to highly relevant topics of ethics at the beginning of the millennium. Active learning approaches need students to be involved more in teaching and learning processes. Mintz (1995:262) suggested the use of video presentations or role-playing. In addition, the case method using ethical dilemma cases has been a primary approach to teaching ethics in accounting education. Loeb and Rockness (1992:487) mentioned that the case method could provide an interesting and sound methodology that could be of assistance to instructors wishing to integrate ethics into their courses.

4. AN ASSIGNMENT: TEACHING ETHICS IN AN INTERMEDIATE ACCOUNTING COURSE

We research whether accounting and reporting ethics is perceived as an important learning outcome in an intermediate accounting course at an upper Midwest Public University. In the accounting undergraduate program, we experimented with this study, there have been five learning objectives. One of those relates to ethics in accounting and reporting as follows:

LO2: Integrate ethical theories and regulatory guidelines into the practice of public, private, and tax accounting; understand the need for professional integrity and objectivity. (LO2: Ethics and integrity in accounting, auditing, and tax)

The school has never had a stand-alone ethics course since it has not had room for a separate ethics course in the accounting curriculum for years. The school has not had a graduate program in accounting, either, and has had five financial accounting courses for undergraduate-level college education. One of those has been Accounting Principles, three of those Intermediate Accounting, and one Advanced Accounting. None of the financial and managerial accounting courses had some context relating to ethics. Ethics has been involved only in Principles of Auditing. However, neither direct nor indirect assessment has been realized as an output evaluation for the ethics part of the auditing course. Thus, there has been a need to cover ethics in one of the courses of the accounting curriculum. Even though there have been difficulties in



the teaching of ethics in undergraduate non-ethics courses (Parr, 1980: 51-66), we voluntarily experimented with teaching ethics in the third intermediate accounting course of the school.

4.1. Purpose and Method of the Study

Adkins and Radtke (2004:282) remarked that "the value of ethics education may be perceived relatively small and so, ethics education may be viewed unimportant." In addition, they may even feel that 'business ethics is an oxymoron.' Because of that, we set the purpose of the experimental study to determine whether teaching accounting and reporting ethics is an important learning outcome in an intermediate accounting course. The study aimed to achieve two of the common goals mentioned above of teaching ethics in college education for accounting majors. Through the ethics part of the third intermediate accounting course, the study aimed at the students would be able to:

- recognize issues in accounting that have ethical implications.
- develop the abilities needed to deal with ethical conflicts or dilemmas.

The study raises some *research questions* to determine whether the students perceive or value teaching accounting and reporting ethics as an important learning outcome in an intermediate accounting course.

- Do the students value and care about studying ethical dilemma cases as part of the intermediate accounting course they took? Is there any significant difference in their perceptions and valuations between the classes of different semesters and different courses?
- Do the students think of studying the ethical dilemma cases *relevant* to the course of intermediate accounting they took? Is there any significant difference in their perceptions and valuations of the relevancy between the classes of different semesters and different courses?
- Do the students think studying ethical dilemma cases *worthwhile* during the intermediate accounting course they took? Is there any significant difference in their perceptions and valuations of the worthiness between the classes of different semesters and different courses?
- Do the students think studying ethical dilemma cases *time-consuming* during the intermediate accounting course they took? Is there any significant difference in their perceptions and valuations of the time-consuming between the classes of different semesters and different courses?
- Do the students think a *two-step approach* is suitable as posting first and then viewing posts by other students in studying ethical dilemma cases during the intermediate accounting course they took? Is there any significant difference in their perceptions and valuations of the approach followed in the study between the classes of different semesters and different courses?
- What do the students think of the *materials* they used in studying ethical dilemma cases during the intermediate accounting course they took? Is there any significant difference in their perceptions and valuations of the material usage in the study between the classes of different semesters and different courses?
- Do the students find *enjoyment* in studying the ethical dilemma cases during the intermediate accounting course they took? Is there any significant difference in their



perceptions and valuations of the enjoyment between the classes of different semesters and different courses?

- Do the students think studying ethical dilemma cases is *a good opportunity* to put their knowledge into practice during the intermediate accounting course they took? Is there any significant difference in their perceptions and valuations of the idea of a good opportunity between the classes of different semesters and different courses?
- What recommendations may the students have for the future of the assignment?

4.2. Assessing the Assignment

Assessment has become one of the foundations of effective college-level learning (Buller, 2010). Thus, every college professor should ask himself/herself a question at the end of each semester: *How can I do even better than I am doing now?* Previously, college professors used to ask themselves the question of *how did we do*? One could argue that accreditation processes changed the paradigm in colleges and universities. Assurance of learning has been very important for AACSB-accredited business schools around the world (AACSB.edu, 2023:5).

All of those should use well-documented assurance of learning processes including direct and indirect measurements for ensuring the quality and effectiveness of teaching. The outcomes of the assignment for teaching ethics in an intermediate accounting course have been assessed by direct and indirect assessment tools and techniques at the department level learning outcomes. For the direct assessment (not included in the study on purpose), a multi-trait assessment rubric (Appendix 1) has been developed and used so far.

The study does not cover the outcomes of the direct assessment of the assignment. For the indirect assessment, as an instrument, a survey (Exhibit 1) was developed and applied during the last four semesters. The results of the indirect assessment are discussed in upcoming parts of the study.

Relevance	Studying "Ethical Dilemma Cases" was relevant for this course		
Worthwhile	Studying "Ethical Dilemma Cases" was worthwhile for me to study		
Time-consuming	For "Ethical Dilemma Cases", I did not spend more time than expected		
Approach	For "Ethical Dilemma Cases" a two-step approach was suitable as posting first		
Materials needed For "Ethical Dilemma Cases" I did not need to use extra materials for the discussions			
Enjoyment	Discussing "Ethical Dilemma Cases" was an enjoyable part of accounting and reporting ethics studying		
Apply knowledge	Discussing "Ethical Dilemma Cases" was a good opportunity for me to apply my knowledge		

Exhibit 1: Likert Scale Statements and an Op	pen-ended Question
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The evaluation of the outcomes of the assignment of teaching ethics is an important aspect of education (Loeb, 1991:77). Thus, the assessment of teaching ethics in an intermediate accounting course has led to changes. The number of short cases has increased. The procedures have changed. Initially, the assignment started with three short cases and followed only a self-discussion approach. Then, ultimately the discussions are taken to the classroom sessions that students suggested to do so.

4.3. Procedures of the Assignment

The experimental study follows an interactive approach through the CANVAS Learning system's online discussion tool to engage the students. The ethics teaching activities in an



intermediate accounting course for the study have around ten percent of the whole grade of the course. This study has three steps for teaching ethics in an intermediate accounting course.

Step 1: Some short cases from the textbook (Kieso et al., 2022) adopted for the course are first provided. Students are asked to study the cases provided and they are asked to post their works on the cases having such instructions or requirements that are like what Mintz (2016: 28) raised as follows:

- What are the ethical issues in the case (ethical reasoning)?
- What consequences would occur if that decision mentioned in the case were made?
- How the stakeholders of the company would be affected by the proposed solution?
- If you were that person, what would you do?

Step 2: Students make comments on their peers' posts. Afterward, students are requested to make a statement on whose post except theirs is the best and why. Whoever gets any votes from their peers gets one extra credit for each vote as *peer evaluation*. It aims to get students to care about their posts. After the deadline, the instructor and students briefly review the case in the classroom.

Step 3: At the end of the semester, as *an indirect assessment of the assignment*, a survey is optionally conducted to determine whether the experiment is worthwhile and to address the research questions mentioned above. The questionnaire has seven Likert scale statements (Exhibit 1) (strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, strongly disagree = 1). In addition, it has one open-ended question asking students' recommendations for future repetitions.

4.4. The Data

As mentioned above, a questionnaire was developed and used to collect data for conducting an indirect assessment to ensure the quality and effectiveness of the assignment of teaching ethics in an intermediate accounting course.

The major has three intermediate accounting courses. The assignment is conducted mainly in the third one during the last four semesters Spring 2022, Fall 2022, Spring 2023, Fall 2023, and Spring 2024. Additionally, during the Spring of 2023, the second intermediate accounting course is included in the assignment of teaching ethics in an intermediate accounting course. Thus, the study has four intermediate accounting III groups and one intermediate accounting II group.

Appendix 2 has response rates of the groups and means and standard deviations on the responses of those. The response rate to the survey was more than satisfactory. In each section of the data, participation was greater than 95%. The students' perceptions and thoughts on the assignment were positive and encouraging.

As seen in Appendix 2, the overall mean for the statements is 3.83 (with 0.86 St. Dev.) out of 5. The means for the individual statements are greater than 3.75 (*as* 75% of 5) out of 5 except one that has 3.61 (*Materials_needed*). Standard deviations for the individual statements are lower than 1 out of 5.

4.5. The Empirical Analyses

The Analysis of Variance (ANOVA) test is used to assess whether a significant difference exists among the means of independent groups. As a parametric test, ANOVA is best applied when



the data adheres to a normal distribution and exhibits equal variances across groups. If these assumptions are met, ANOVA is the preferred choice. However, when these assumptions are not satisfied, or in the case of ordinal data, the Kruskal-Wallis test emerges as a more fitting alternative.

Initially, an assessment was conducted to ascertain the normal distribution of the data. This preliminary step aimed to determine the suitability of employing either a parametric or non-parametric test.

The outcomes of the Shapiro-Wilk normality test, presented in Exhibit 2, prompted the recognition that the application of the ANOVA test would be unsuitable for the empirical analysis of the data in discerning any substantial variances in students' perspectives and perceptions of the assignment. Consequently, a decision was made to opt for the Kruskal-Wallis test, a non-parametric alternative, to better accommodate the characteristics of the data. Abbreviations (codes) for all courses and statements are presented in Appendix 3.

Groups	Values	Results
ia_2_s_23_st1_7	W = 0.93591, p-value = 0.03091	Normally distributed
ia_3_s_22_st1_7	W = 0.90488, p-value = 0.006189	Not normally distributed
ia_3_f_22_st1_7	W = 0.94182, p-value = 0.03016	Not normally distributed
ia_3_s_23_st1_7	W = 0.93056, p-value = 0.05689	Normally distributed
ia_3_f_23_st1_7	W = 0.94370, p-value = 0.03853	Not normally distributed
ia_3_s_24_st1_7	W = 0.95495, p-value = 0.1297	Normally distributed

Exhibit 2: Results of the Shapiro-Wilk Normality Test for All Statements

The students have conveyed positive and affirmative perspectives regarding the assignment. After empirical analyses, it has been discerned that there is uniformity in the perceptions and thoughts across all groups, indicating an absence of statistically significant differences [Kruskal-Wallis, chi-squared = 7.5226, df = 5, p-value = 0.1846 > 0.05]. A comprehensive illustration depicting the aggregate view of students' choices for all statements, including the means and standard deviations for each semester, is presented in Figure 1.

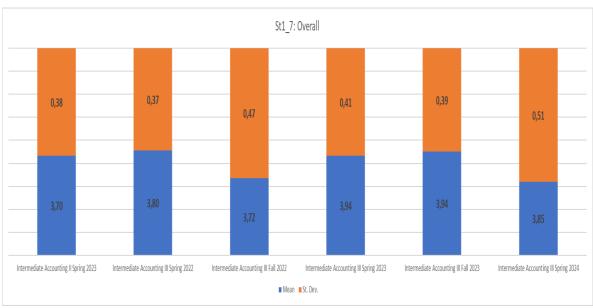


Figure 1: Students' Responses for All Statements

The first statement is on the relevancy which means whether students find studying ethical dilemma cases through the online discussion tool of the CANVAS is relevant to the course of



intermediate accounting they take. The results show that the data for the first statement (st1) was not normally distributed (Exhibit 3).

Groups	Values	Results
ia_2_s_23_st1	W = 0.84125, p-value = 8.149e-05	Not normally distributed
ia_3_s_22_st1	W = 0.75304, p-value = 3.573e-06	Not normally distributed
ia_3_f_22_st1	W = 0.73447, p-value = 1.817e-07	Not normally distributed
ia_3_s_23_st1	W = 0.81685, p-value = 0.0001701	Not normally distributed
ia_3_f_23_st1	W = 0.84012, p-value = 3.582e-05	Not normally distributed
ia_3_s_24_st1	W = 0.844, p-value = 9.432e-05	Not normally distributed

Exhibit 3: Results of the Shapiro-Wilk Normality Test for the First Statement

The students' attitudes and perspectives regarding the first statement were positively inclined and constructive. However, empirical analyses indicated discernible distinctions in the attitudes and perspectives across various groups [Kruskal-Wallis, chi-squared = 9.6752, df = 5, p-value = 0.08498 > 0.05]. As the p-value is greater than the significance level 0.05, we conclude that there are no significant differences among groups. The overall picture of the first statement that students provide their choices can be seen in Figure 2 which has means and standard deviations of the semesters.



Figure 2: Students' Responses to the First Statement

The second statement is on the worthiness which means whether students find studying ethical dilemma cases in an intermediate accounting course they take through the online discussion tool of the CANVAS is worthwhile. The results show that the data for the second statement was not normally distributed (Exhibit 4).

Exhibit 4: Results of the Shapiro-Wilk Normality Test for the Second Statement

Groups	Values	Results
ia_2_s_23_st2	W = 0.89192, p-value = 0.001519	Not normally distributed
ia_3_s_22_st2	W = 0.78985, p-value = 1.641e-05	Not normally distributed
ia_3_f_22_st2	W = 0.80090, p-value = 3.757e-06	Not normally distributed
ia_3_s_23_st2	W = 0.82490, p-value = 0.0002416	Not normally distributed
ia_3_f_23_st2	W = 0.80416, p-value = 5.438e-06	Not normally distributed
ia 3 s 24 st2	W = 0.84985, p-value = 0.0001293	Not normally distributed



The students' perceptions and thoughts on the second statement were positive and encouraging. According to empirical analyses, the perceptions and thoughts of all groups are not the same. *[Kruskal-Wallis, chi-squared = 14.195, df = 5, p-value = 0.01441 < 0.05]*. As the p-value is less than the significance level 0.05, we conclude that there are significant differences among groups. Therefore, we used *the Pairwise Wilcoxon Rank Sum Test* to calculate *pairwise comparisons* between group levels with corrections for multiple testing. As seen in Exhibit 5, the pairwise comparison shows that ia_3_s_22_st2 and ia_2_s_23_st2 are significantly different (p=0.018 < 0.05).

Exhibit 5: Pairwise Comparisons for the Second Statement

Pairwise comparisons using Wilcoxon rank sum test with continuity correction

data: data_df\$values and data_df\$ind

3_st2 ia_3_s_22_s	st2 ia_3_f_22	_st2 ia_3_s_23	_st2 ia_3_f_23_st2
-	-	-	-
0.411	-	-	-
1.000	1.000	-	-
1.000	1.000	1.000	-
1.000	1.000	1.000	1.000
	0.411 1.000 1.000	0.411 - 1.000 1.000 1.000 1.000	1.000 1.000 - 1.000 1.000 1.000

P value adjustment method: bonferroni

The overall picture of the second statement that students provide their choices can be seen in Figure 3 which has means and standard deviations of the semesters.

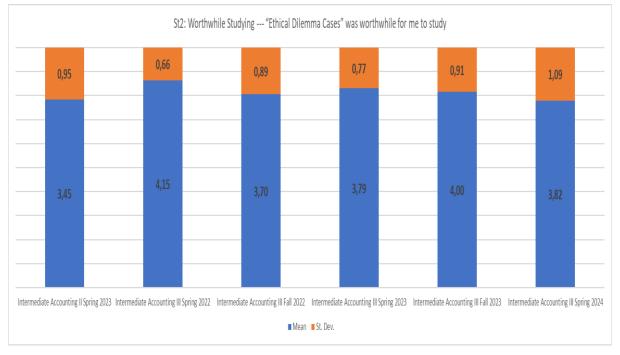


Figure 3: Students' Responses to the Second Statement

Significant statistical differences have been identified in the "Worthwhile: Studying 'Ethical Dilemma Cases' was worthwhile for me to study" statement between Intermediate Accounting II Spring 2023 and Intermediate Accounting III Spring 2022 courses.

The average for Intermediate Accounting II Spring 2023 is 3.45, with a standard deviation of 0.95, while for Intermediate Accounting III Spring 2022, the average is 4.15, with a standard

deviation of 0.66. This discrepancy suggests that students in these two courses hold significantly different views regarding the worthiness of studying ethical dilemma cases.

These findings underscore the importance of considering variations in student perspectives across different accounting courses, which may be influenced by various factors such as course content, teaching methods, or the dynamics of the learning environment. Further exploration into the reasons behind these disparities could provide valuable insights for enhancing the effectiveness of ethical education in accounting curricula.

The third statement is on the time-consuming which means whether students find studying ethical dilemma cases in an intermediate accounting course they take through the online discussion tool of the CANVAS is time-consuming more than they expect. The results show that the data for the third statement was not normally distributed (Exhibit 6).

Exhibit 6: Results of the Shapiro-Wilk Normality Test for the Third Statement

Groups	Values	Results
ia_2_s_23_st3	W = 0.79748, p-value = 9.292e-06	Not normally distributed
ia_3_s_22_st3	W = 0.72398, p-value = 1.173e-06	Not normally distributed
ia_3_f_22_st3	W = 0.77143, p-value = 9.197e-07	Not normally distributed
ia_3_s_23_st3	W = 0.74126, p-value = 8.713e-06	Not normally distributed
ia_3_f_23_st3	W = 0.76285, p-value = 7.819e-07	Not normally distributed
ia_3_s_24_st3	W = 0.7486, p-value = 1.096e-06	Not normally distributed

The students' perceptions and thoughts on the third statement were positive and encouraging. According to empirical analyses, the perceptions and thoughts of all groups are the same. *[Kruskal-Wallis, chi-squared* = 4.0784, df = 5, p-value = 0.5382 > 0.05]. As the p-value is greater than the significance level 0.05, we conclude that there are no significant differences among groups. The overall picture of the third statement that students provide their choices can be seen in Figure 4 which has means and standard deviations of the semesters.

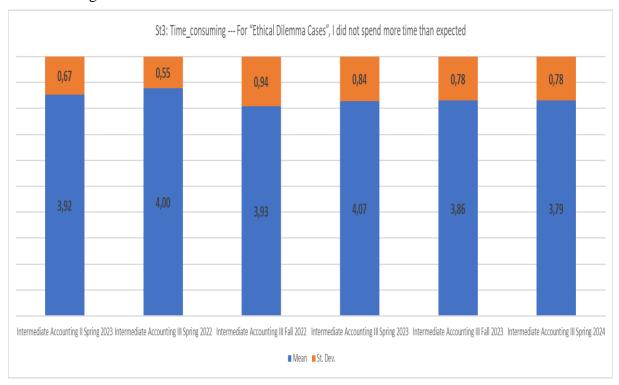


Figure 4: Students' Responses to the Third Statement



The fourth statement is on the two-step approach which means whether students find studying ethical dilemma cases by two-step approach in an intermediate accounting course they take through the online discussion tool of the CANVAS is acceptable. The results show that the data for the fourth statement was not normally distributed (Exhibit 7).

Groups	Values	Results
ia_2_s_23_st4	W = 0.87211, p-value = 0.0004551	Not normally distributed
ia_3_s_22_st4	W = 0.76307, p-value = 5.341e-06	Not normally distributed
ia_3_f_22_st4	W = 0.84039, p-value = 3.019e-05	Not normally distributed
ia_3_s_23_st4	W = 0.78658, p-value = 4.844e-05	Not normally distributed
ia_3_f_23_st4	W = 0.82879, p-value = 1933e.05	Not normally distributed
ia_3_s_24_st4	W = 0.73295, p-value = 5.825e-07	Not normally distributed

Exhibit 7: Results of the Shapiro-Wilk Normality Test for the Fourth Statement

The students' perceptions and thoughts on the fourth statement were positive and encouraging. According to empirical analyses, the perceptions and thoughts of all groups are the same. [Kruskal-Wallis, chi-squared = 5.9979, df = 5, p-value = 0.3064 > 0.05]. As the p-value is greater than the significance level 0.05, we conclude that there are no significant differences among groups. The overall picture of the fourth statement that students provide their choices can be seen in Figure 5 which has means and standard deviations of the semesters.

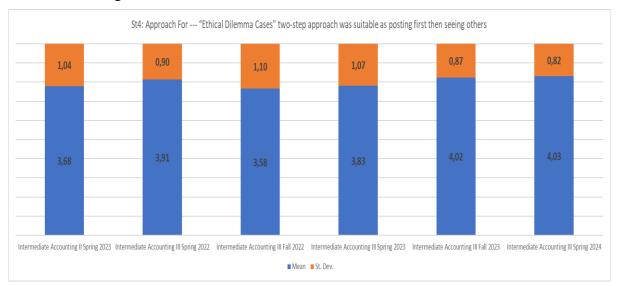


Figure 5: Students' Responses to the Fourth Statement

The fifth statement is on the materials that students might have needed. The fifth statement means whether students find that they did not use extra materials to work on the ethical dilemma cases in an intermediate accounting course they take through the online discussion tool of CANVAS. The results show that the data for the fifth statement was not normally distributed (Exhibit 8).

Exhibit 8: Results of	of the Shapiro	o-Wilk Normalit	v Test for the	Fifth Statement
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Groups	Values	Results
ia_2_s_23_st5	W = 0.83486, p-value = 5.829e-05	Not normally distributed
ia_3_s_22_st5	W = 0.86321, p-value = 0.0005605	Not normally distributed
ia_3_f_22_st5	W = 0.83548, p-value = 2.297e-05	Not normally distributed
ia_3_s_23_st5	W = 0.82289, p-value = 0.0002211	Not normally distributed
ia_3_f_23_st5	W = 0.76679, p-value = 9.324e-07	Not normally distributed
ia_3_s_24_st5	W = 0.82426, p-value = 3.392e-05	Not normally distributed

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In the examination of potential differences among the means of six independent groups labeled as $ia_2s_2s_5$, $ia_3s_2s_5$, $ia_3f_2s_5$, $ia_3f_2s_5$, $ia_3s_2s_5$, $ia_3f_2s_5$, $ia_3f_2s_5$, and ia_3_s_24_st5 a statistical analysis was conducted to assess whether the assumptions were met. Due to the violation of the normality assumption, the traditional Analysis of Variance (ANOVA) was deemed inappropriate, prompting the utilization of the Kruskal-Wallis test. The results of the Kruskal-Wallis test revealed statistically significant differences among the groups, [Kruskal-Wallis, chi-squared = 36.788, df = 5, p-value = 6.605e-07 < 0.05] prompting further investigation through pairwise comparisons using the Wilcoxon Rank Sum Test. Subsequently, pairwise comparisons were performed using the Wilcoxon Rank Sum Test with Bonferroni adjustment for multiple testing. As seen in Exhibit 9, the pairwise comparison shows that ia 3 s 22 st5 and ia 2 s 23 st5 are significantly different (p=0.00309 < 0.05). And ia_3_f_22_st5 and ia_3_s_22_st5 are significantly different (p=0.00810 < 0.05). Also, ia_3_s_23_st5 and ia_3_s_22_st5 are significantly different (p=3.1e-05 < 0.05). Additionally, ia_3_f_23_st5 and ia_3_s_22_st5 are significantly different (p=3.5e-05 < 0.05). Furthermore, ia_3_s_24_st5 and ia_3_s_22_st5 are significantly different (p=0.00014 < 0.05).

Exhibit 9: Pairwise Comparisons for the Fifth Statement

Pairwise comparisons using Wilcoxon rank sum test with continuity correction

data: data_df\$values and data_df\$ind

		ia_3_s_22_st5	ia_3_f_22_st5	ia_3_s_23_st5	ia_3_f_23_st5
ia_3_s_22_st5	0.00309		-	-	-
ia_3_f_22_st5	1.00000	0.00810	-	-	-
ia_3_s_23_st5	0.26649	3.1e-05	0.54383	-	-
ia_3_f_23_st5	1.00000	3.5e-05	1.00000	1.00000	-
ia_3_s_24_st5	1.00000	0.00014	1.00000	1.00000	1.00000

P value adjustment method: bonferroni

The overall picture of the fifth statement that students provide their choices can be seen in Figure 6 which has means and standard deviations of the semesters.

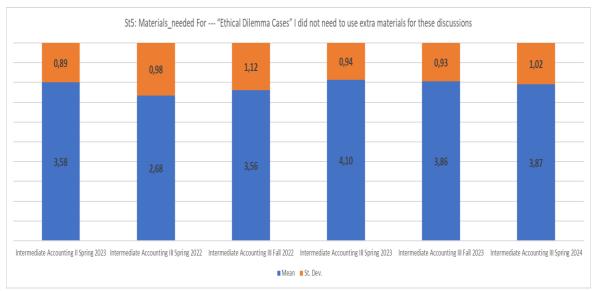


Figure 6: Students' Responses to the Fifth Statement

The course Intermediate Accounting III Spring 2022 exhibits a statistically significant lower average in the statement "Materials needed: For 'Ethical Dilemma Cases,' I did not need to use extra materials for these discussions" compared to the other five courses. This disparity underscores a noteworthy difference in student perceptions regarding the necessity of additional materials for discussions related to ethical dilemma cases in Intermediate Accounting III Spring 2022. This finding raises intriguing questions about potential factors influencing the course dynamics, teaching methodologies, or the content structure of Intermediate Accounting III Spring 2022. Further investigation into the reasons behind this statistical significance may offer valuable insights into tailoring instructional approaches and content delivery for enhancing students' experiences in ethical discussions within the accounting curriculum.

The sixth statement is on *enjoyment* which means whether students find studying ethical dilemma cases in an intermediate accounting course they take through the online discussion tool of the CANVAS is *enjoyable*. The results show that the data for the sixth statement was not normally distributed (Exhibit 10).

Groups	Values	Results
ia_2_s_23_st6	W = 0.82442, p-value = 3.421e-05	Not normally distributed
ia_3_s_22_st6	W = 0.82848, p-value = 9.584e-05	Not normally distributed
ia_3_f_22_st6	W = 0.84467, p-value = 3.844e-05	Not normally distributed
ia_3_s_23_st6	W = 0.80967, p-value = 0.0001588	Not normally distributed
ia_3_f_23_st6	W = 0.80596, p-value = 5949e-06	Not normally distributed
ia_3_s_24_st6	W = 0.81731, p-value = 2.402e-05	Not normally distributed

The students' perceptions and thoughts on the sixth statement were positive and encouraging. According to empirical analyses, the perceptions and thoughts of all groups are the same. *[Kruskal-Wallis, chi-squared = 7.8776, df = 5, p-value = 0.1631 > 0.05]*. As the p-value is greater than the significance level 0.05, we conclude that there are no significant differences among groups. The overall picture of the sixth statement that students provide their choices can be seen in Figure 7 which has means and standard deviations of the semesters.

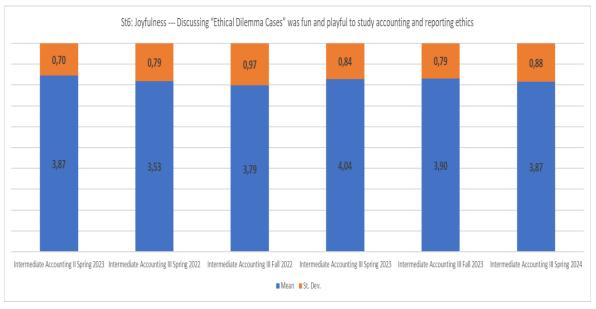


Figure 7: Students' Responses to the Sixth Statement



The seventh statement is on applying knowledge which means whether students find studying ethical dilemma cases in an intermediate accounting course they take through the online discussion tool of the CANVAS is an opportunity for them to apply their knowledge already gained during their college education.

The results show that the data for the seventh statement was not normally distributed (Exhibit 11).

Groups	Values	Results
ia_2_s_23_st7	W = 0.85703, p-value = 0.0001921	Not normally distributed
ia_3_s_22_st7	W = 0.67160, p-value = 1.856e-07	Not normally distributed
ia_3_f_22_st7	W = 0.78713, p-value = 1.919e-06	Not normally distributed
ia_3_s_23_st7	W = 0.77822, p-value = 3.482e-05	Not normally distributed
ia_3_f_23_st7	W = 0.76983, p-value = 1.069e-06	Not normally distributed
ia_3_s_24_st7	W = 0.83267, p-value = 5.205e-05	Not normally distributed

Exhibit 11: Results of the Shapiro-Wilk Normality Test for the Seventh Statement

The students' perceptions and thoughts on the seventh statement were positive and encouraging. According to empirical analyses, the perceptions and thoughts of all groups are the same.

[Kruskal-Wallis, chi-squared = 5.0953, df = 5, p-value = 0.4044 > 0.05]. As the p-value is greater than the significance level 0.05, we conclude that there are no significant differences among groups.

The overall picture of the seventh statement that students provide their choices can be seen in Figure 8 which has means and standard deviations of the semesters.

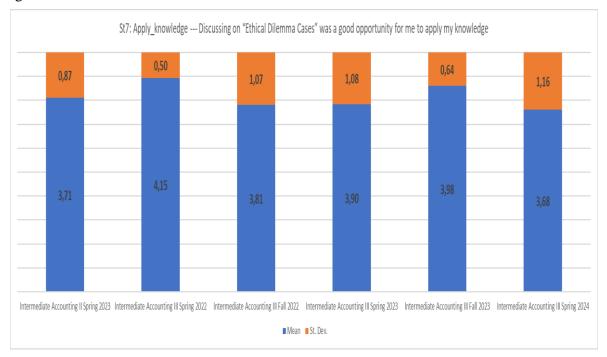


Figure 8: Students' Responses to the Seventh Statement

The questionnaire has an open-ended question asking participants' possible recommendations for the future. Students' recommendations are summarized below:



$\underline{IA - II - S - 2023}$

27 out of 38 students overall supported the course component. Examples:

- *I wouldn't change anything about these, it is a good way to get points as well as apply knowledge.*
- I would keep the same format and also keep doing them in general. These were fun little cases that made you think in a real-life scenario especially when applying ethical reasoning to it.
- Continue using them as they are implemented. I enjoyed doing them as they were, I just don't think I learned a whole lot from them.
- Wouldn't change anything you did.

Additionally, 18 out of 38 students suggested bringing the cases to the classroom. Examples:

- I would discuss the ethical dilemmas more in class after the students submitted their answers. This way, I would be able to tell them any relevant stories or others know have been through.
- I would talk about the ethical dilemmas in class for a few minutes.
- *I would talk about them in class. or do a before and after to see what students thought before they learned about the subject and after.*

IA - III - S - 2022: 20 out of 34 students supported the course component. Additionally, 20 out of 34 students suggested bringing the cases to the classroom.

IA - III - F - 2022: 27 out of 43 students supported the course component. Additionally, 21 out of 43 students suggested bringing the cases to the classroom.

IA - III - S - 2023: 21 out of 29 students supported the course component. Additionally, 15 out of 29 students suggested bringing the cases to the classroom.

IA - III - F - 2023: 38 out of 43 students supported the course component. Additionally, 15 out of 43 students suggested bringing the cases to the classroom.

IA - III - S - 2024: The experiential study was generally perceived positively. 38 students provided their feedback on the study. 19 of those students supported the course component without making any major changes. 12 of those students recommended making the course component to the advanced level. 8 of those students recommended bringing the cases to the classroom and discussing those in groups. Only one student was against the study.

5. OVERALL FINDINGS

Through the ethics part of the third intermediate accounting course, the study contributed to adding value to the knowledge that students gained during their college education. As a result of the partial ethical study in an intermediate accounting course, the study shows that students can:

- recognize issues in accounting that have ethical implications.
- *develop the abilities needed to deal with ethical conflicts or dilemmas.*

The study addresses some *research questions* raised for the study to determine whether the students perceive or value teaching accounting and reporting ethics as an important learning outcome in an intermediate accounting course.

The overall findings of the study are as follows:

- The students value and care about studying ethical dilemma cases as part of the intermediate accounting course. There have been no significant differences in their perceptions and valuations between the classes of different semesters and different courses.
- The students think studying ethical dilemma cases is *relevant* to the course of intermediate accounting. There have been no significant differences in their perceptions and valuations of the relevancy among some classes of different semesters and different courses.
- The students think studying ethical dilemma cases *is worthwhile* during the intermediate accounting courses. The study shows that there have been some significant differences in the students' perceptions and valuations of the worthiness they used among some classes of different semesters and different courses.
- The students think studying ethical dilemma cases is *time-consuming* during the intermediate accounting course. There have been no significant differences in their perceptions and valuations of the time-consuming between the classes of different semesters and different courses.
- The students think a *two-step approach* is suitable as posting first and then viewing other students' posts in studying ethical dilemma cases during the intermediate accounting courses. There have been no significant differences in their perceptions and valuations of the approach followed in the study between the classes of different semesters and different courses.
- The students think of the *materials* they used in studying ethical dilemma cases during the intermediate accounting course they took. The study shows that there have been some significant differences in the students' perceptions and valuations of the materials they used among some classes of different semesters and different courses.
- The students think studying ethical dilemma cases is *enjoyable* during the intermediate accounting course. There have been no significant differences in their perceptions and valuations of the enjoyment between the classes of different semesters and different courses.
- The students think studying ethical dilemma cases is *a good opportunity* to put their knowledge into practice during the intermediate accounting course they took. There have been no significant differences in their perceptions and valuations of the idea of a good opportunity between the classes of different semesters and different courses.
- The students overall support the course component. They recommend continuing and suggest bringing ethical dilemma cases to the classroom.

6. SUMMARY AND CONCLUSIONS

This study documents an experiential study of teaching ethics in an intermediate accounting course at a middle-class public university in the U.S. The experiential study covers six-course experiments in four post-covid semesters.

The empirical analyses show that studying financial reporting and accounting ethical dilemma cases in an intermediate accounting course is perceived as an important learning outcome. Thus,



the study's findings encourage adding ethical dilemma cases in intermediate accounting course content at the undergraduate level.

It could be argued that this study can be a significant experiential one and could be an important example of business schools not having specific business or accounting ethics courses.

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Appendix 1: Ethical Responsibility for Financial Reporting Rubric - ACC 313 Intermediate Accounting III

<u>Goal</u>: Our students will be prepared to integrate ethical theories and regulatory guidelines into the practice of public, private, and tax accounting; understand the need for professional integrity and objectivity

Objective: Students will be able to identify, measure, and communicate the impacts of ethical considerations for financial reporting that conform with the U.S. GAAP.

Traits	Does not meet expectations (1)	Meets expectations (2)	More than meets expectations (3)			
Demonstrate an awareness of ethical responsibilities for the financial reporting environment (a)	Fails to demonstrate an awareness of ethical responsibilities for financial reporting	Demonstrates an awareness of ethical responsibilities for financial reporting	Demonstrates an in- depth awareness of ethical responsibilities for financial reporting			
Identify the differences between legal and ethical violations in financial reporting (b)	Fails to identify the differences between legal and ethical violations in financial reporting	Identifies the differences between legal and ethical violations in financial reporting	Identifies the differences between legal and ethical violations in detail on financial reporting			
Recognize the importance of standards of ethical business conduct for financial reporting (c)	Fails to recognize the importance of standards of ethical conduct for financial reporting	Recognizes the importance of standards of ethical conduct for financial reporting	Recognizes in depth the importance of standards of ethical conduct for financial reporting			
Apply the U.S. GAAP and Financial Accounting Standards of the FASB (d)	States a position but fails to apply the U.S. GAAP	States a position and considers, at a basic level, how to apply the U.S. GAAP	States a position and considers in depth the principles and concepts of the U.S. GAAP			

Adapted January 2022



Appendix 2: Overall Data for Empirical Analyses				St1 St2		St3		St4		St5		St6		St7						
		R.Rate	R.Rate Overall		Relevance		Worthwhile		Time- consuming		Approach		Materials needed		Joyfulness		Apply knowledge			
		Ν	n		Mean	St.Dev.	Mean	StDev	Mean	StDev	Mean	StDev	Mean	StDev	Mean	StDev	Mean	StDev	Mean	StDev
Spring 2023	IA-II-S-23	40	38	95.00%	3.70	0.84	3.68	0.74	3.46	0.96	3.92	0.67	3.68	1.04	3.58	0.89	3.87	0.70	3.71	0.87
Spring 2022	IA-III-S-22	35	34	97.14%	3.80	0.71	4.21	0.59	4.15	0.67	4.00	0.55	3.91	0.90	2.68	0.98	3.53	0.79	4.15	0.5
Fall 2022	IA-III-F-22	44	43	97.73%	3.72	1.00	3.70	0.89	3.70	0.89	3.93	0.94	3.58	1.10	3.56	1.12	3.79	0.97	3.81	1.07
Spring 2023	IA-III-S-23	30	29	96.67%	3.94	0.97	3.86	1.22	3.79	0.77	4.07	0.86	3.83	1.07	4.10	0.94	4.03	0.82	3.9	1.08
Fall 2023	IA-III-F-23	43	42	97.67%	3.94	0.82	3.93	0.75	4.00	0.91	3.86	0.78	4.02	0.87	3.86	0.93	3.90	0.79	3.98	0.64
Spring 2024	IA-III-S-24	38	38	100.00%	3.85	0.83	3.87	0.99	3.82	1.09	3.79	0.78	4.03	0.82	3.87	1.02	3.87	0.88	3.68	1.16
Total		230	224	97.39%	3.83	0.86	3.87	0.86	3.82	0.88	3.93	0.76	3.84	0.97	3.61	0.98	3.83	0.82	3.87	0.89

Labels							
IA-II-S-23	Intermediate Accounting II Spring 2023						
IA-III-S-22	Intermediate Accounting III Spring 2022						
IA-III-F-22	Intermediate Accounting III Fall 2022						
IA-III-S-23	Intermediate Accounting III Spring 2023						
IA-III-F-23	Intermediate Accounting III Fall 2023						
IA-III-S-24	Intermediate Accounting III Spring 2024						

	Statements							
St1	Relevance	Studying "Ethical Dilemma Cases" was relevant for this course						
St2	Worthwhile	Studying "Ethical Dilemma Cases" was worthwhile for me to study						
St3	Time-consuming	For "Ethical Dilemma Cases", I did not spend more time than expected						
St4	Approach	For "Ethical Dilemma Cases" a two-step approach was suitable as posting first and then seeing others						
St5	Materials needed	For "Ethical Dilemma Cases" I did not need to use extra materials for these discussions						
St6	Joyfulness	Discussing "Ethical Dilemma Cases" was fun and playful to study accounting and reporting ethics						
St7	Apply knowledge	Discussing on "Ethical Dilemma Cases" was a good opportunity for me to apply my knowledge						



Appendix 3: Codes of Courses and Statements

			Intermediate Accounting II Spring 2023	Intermediate Accounting III Spring 2022	Intermediate Accounting III Fall 2022	Intermediate Accounting III Spring 2023	Intermediate Accounting III Fall 2023	Intermediate Accounting III Spring 2024
			ia_2_s_23	ia_3_s_22	ia_3_f_22	ia_3_s_23	ia_3_f_23	ia_3_s_24
All Statements	All Statements	St1_7	ia_2_s_23_st1- 7	ia_3_s_22_st1- 7	ia_3_f_22_st1-7	ia_3_s_23_st1-7	ia_3_f_23_st1-7	ia_3_s_24_st1-7
Relevance	Studying "Ethical Dilemma Cases" was relevant for this course	St1	ia_2_s_23_st_1	ia_3_s_22_st_1	ia_3_f_22_st_1	ia_3_s_23_st_1	ia_3_f_23_st_1	ia_3_s_24_st_1
Worthwhile	Studying "Ethical Dilemma Cases" was worthwhile for me to study	St2	ia_2_s_23_st_2	ia_3_s_22_st_2	ia_3_f_22_st_2	ia_3_s_23_st_2	ia_3_f_23_st_2	ia_3_s_24_st_2
Time- consuming	For "Ethical Dilemma Cases," I did not spend more time than expected	St3	ia_2_s_23_st_3	ia_3_s_22_st_3	ia_3_f_22_st_3	ia_3_s_23_st_3	ia_3_f_23_st_3	ia_3_s_24_st_3
Approach	For "Ethical Dilemma Cases," a two-step approach was suitable as posting first and seeing others	St4	ia_2_s_23_st_4	ia_3_s_22_st_4	ia_3_f_22_st_4	ia_3_s_23_st_4	ia_3_f_23_st_4	ia_3_s_24_st_4
Materials needed	For "Ethical Dilemma Cases," I did not need to use extra materials for these discussions	St5	ia_2_s_23_st_5	ia_3_s_22_st_5	ia_3_f_22_st_5	ia_3_s_23_st_5	ia_3_f_23_st_5	ia_3_s_24_st_5
Joyfulness	Discussing "Ethical Dilemma Cases" was fun and playful to study accounting and reporting ethics	St6	ia_2_s_23_st_6	ia_3_s_22_st_6	ia_3_f_22_st_6	ia_3_s_23_st_6	ia_3_f_23_st_6	ia_3_s_24_st_6
Apply knowledge	Discussing "Ethical Dilemma Cases" was a good opportunity for me to apply my knowledge	St7	ia_2_s_23_st_7	ia_3_s_22_st_7	ia_3_f_22_st_7	ia_3_s_23_st_7	ia_3_f_23_st_7	ia_3_s_24_st_7