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Auditing Ethics Education, Moral Intensity and Accounting Students' Ethical Decision-Making: An Experimental Study

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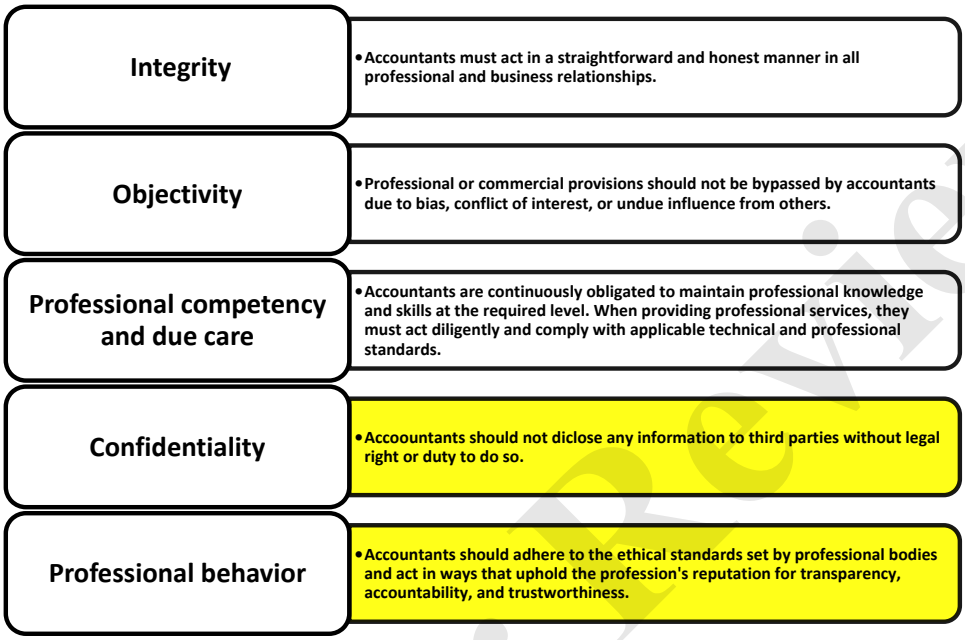

Figure 1: Shared Ethical Principles among Prominent Codes of Ethics
Source: developed by the author

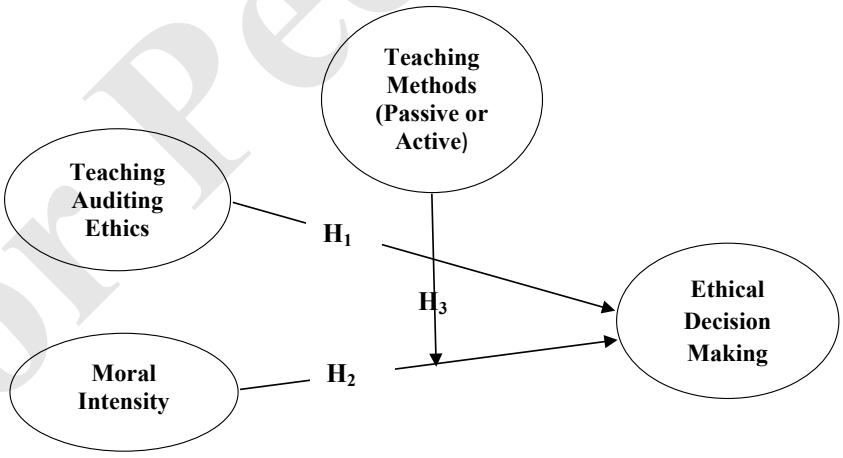

Figure 2: Research Framework

	Moral Intensity	
	High moral intensity	**Low moral intensity**
Auditing Ethics	Teaching Auditing Ethics with high moral intensity	Teaching Auditing Ethics with low moral intensity
	Not teaching auditing Ethics with high moral intensity	Not teaching auditing Ethics with low moral intensity

Figure 3: a 2*2 factorial design experiment

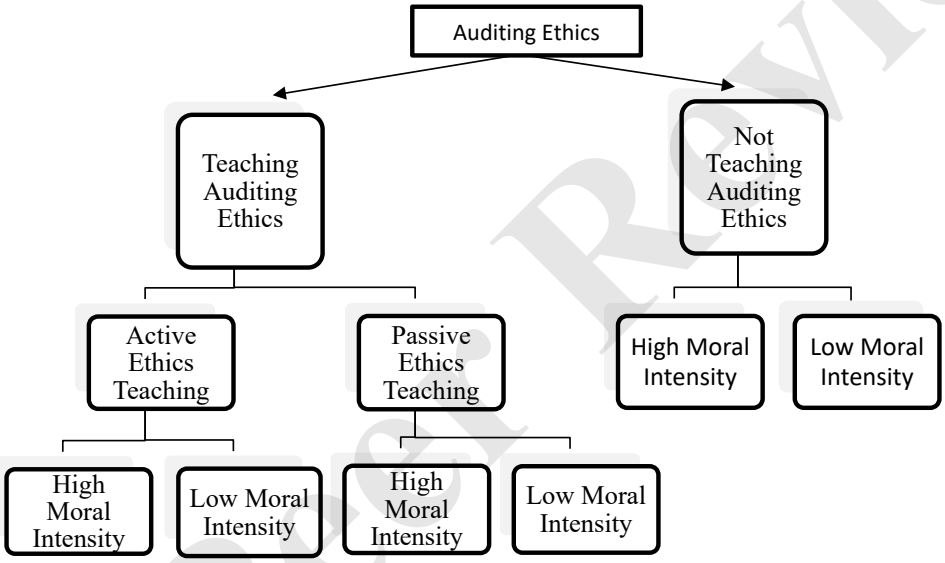

Figure 4: the Effect of Teaching Methods and Moral Intensity on Moral Decision-Making

Table 1: Sample description

	Frequency	**Percentage**
Gender		
Female	66	55%
Male	54	45%
University Ownership types		
State-owned	65	54.2%
Private University	55	45.8%
Age		
≤ 18	44	36.6%
> 18 and ≤ 20	76	63.3%
Total	120	100%

Table 2: Manipulation checks' results

Question	Mean (standard Deviation)		t-test (p-value)
	High Moral Intensity	Low Moral Intensity	
Magnitude of consequences	5.76 (0.89)	3.31 (0.79)	3.93 (0.05)*
Social consensus	4.92 (0.95)	2.88 (0.81)	3.43 (0.05)*
Probability of effect	5.51 (0.78)	3.23 (0.91)	3.82 (0.05)*
Temporal immediacy	5.10 (0.97)	2.12 (0.99)	4.12 (0.03)*
Proximity	5.15 (1.12)	2.92 (0.98)	4.08 (0.04)*
Concentration of effect	4.96 (0.87)	3.53 (0.57)	2.99 (0.05)*

* Significant at the 0.05 level

Table 3: Correlation Matrix

Variables items	Sen1	Sen2	Jud1	Jud2	Jud3	Mot1	Mot2	Chr1	Chr2	Chr3
Sen1	1.00									
Sen2	0.89	1.00								
Jud1	0.34	0.31	1.00							
Jud2	0.33	0.40	0.88	1.00						
Jud3	0.45	0.24	0.42	0.90	1.00					
Mot1	0.23	0.31	0.30	0.25	0.92	1.001				
Mot2	0.42	0.35	0.34	0.34	0.32	0.91	1.00			
Chr1	0.25	0.27	0.33	0.33	0.29	0.41	0.89	1.00		
Chr2	0.43	0.28	0.23	0.40	0.28	0.30	0.36	0.87	1.00	
Chr3	0.36	0.21	0.26	0.44	0.27	0.29	0.27	0.29	0.90	1.00

Notes: Sen 1 and 2 refer to moral sensitivity items; Jud 1, 2, and 3 refer to moral judgment items; Mot 1 and 2 refer to moral motivation; and Chr 1, 2, and 3 refer to moral character.

Table 4: Rotated Component Matrix

Variables' items	**Components**			
	Moral Sensitivity	**Moral Judgment**	**Moral Motivation**	**Moral Character**
Sen1	0.882			
Sen2	0.925			
Jud1		0.916		
Jud2		0.910		
Jud3		0.723		
Mot1			0.613	
Mot2			0.728	
Chr1				0.627
Chr2				0.904
Chr3				0.504

Table 5: Reliability Test Results

Variables	Alpha Coefficient	Alpha coefficient if item deleted	No. of items
Moral Sensitivity	.904		
Sen 1		.803	2
Sen 2		.724	
Moral Judgement	.731		
Jud 1		.621	3
Jud 2		.675	
Jud 3		.504	
Moral Motivation	.714		
Mot 1		.255	2
Mot 2		.613	
Moral Character	.925		
Chr 1		.715	3
Chr 2		.712	
Chr 3		.881	

Table 6: Descriptive Statistics

Variable	Minimum	Maximum	Frequency (%)			
Teaching ethics	1.00	2.00	1: 80 (66.6%) 2: 40 (33.4%)			
Moral intensity	1.00	2.00	1: 50 (50%) 2: 50 (50%)			
Teaching Methods	0.00	2.00	0: 40 (33.3%) 1: 40 (33.3%) 2: 40 (33.4%)			
	Minimum	**Maximum**	**Mean**	**Standard Deviation**	**Teaching auditing Ethics**	
					Yes	**No**
Moral Sensitivity	1.00	7.00	4.2187	1.68294	4.5417	3.2500
Moral Judgment	2.00	6.00	4.0937	1.59393	4.1250	4.0000
Moral Motivation	2.00	6.00	3.9687	1.29703	4.1667	3.3750
Moral Character	2.00	7.00	3.5375	1.69975	3.7167	3.0000

Table 7: Two-way ANOVA for the effect of teaching ethics and moral intensity on moral decision-making

Source	df	Mean squares	F	Sig.	Partial Eta Squared (η2)
Moral Sensitivity					
Teaching auditing ethics	1	5.005	3.744	0.077*	.238
Moral intensity	1	20.672	15.464	0.002***	.563
Teaching auditing ethics*moral intensity	1	2.297	1.718	0.214	.125
error	116	1.337			
total	120				
Moral Judgment					
Teaching auditing ethics	1	.047	.039	0.847	.003
Moral intensity	1	23.380	19.294	0.001***	.617
Teaching auditing ethics*moral intensity	1	4.380	3.615	0.082*	.231
error	116	1.212			
total	120				
Moral Motivation					
Teaching auditing ethics	1	1.880	2.157	0.168	.152
Moral intensity	1	12.505	14.349	0.003***	.545
Teaching auditing ethics*moral intensity	1	1.505	1.727	0.213	.126
error	116	.872			
total	120				
Moral Character					
Teaching auditing ethics	1	1.541	.650	0.436	.051
Moral intensity	1	10.641	4.491	0.056**	.272
Teaching auditing ethics*moral intensity	1	0.041	.017	0.898	.001
error	116	2.369			
total	120				

* Significant at the 0.10 level, ** significant at the 0.05 level. Significant at the .001 level

Table 8: Two-Way ANOVA Results for Teaching Methods, Moral Intensity and Moral Decision-Making

Moral Sensitivity					
Source	**df**	**Mean squares**	**F**	**Sig.***	**Partial Eta squared**
Teaching methods	2	9.013	67.766	0.001	.931
Moral intensity	1	21.000	157.894	0.001	.940
Teaching methods*moral intensity	2	1.992	14.977	0.001	.749
error	114	0.133			
total	120				
Moral Judgment					
Teaching methods	2	6.534	43.56	0.001	.897
Moral intensity	1	22.012	146.746	0.001	.936
Teaching methods*moral intensity	2	2.201	14.673	0.001	.746
error	114	0.150			
total	120				
Moral Motivation					
Teaching methods	2	3.507	16.464	0.001	.772
Moral intensity	1	12.574	59.032	0.001	.855
Teaching methods*moral intensity	2	2.253	10.577	0.003	.679
error	114	0.213			
total	120				
Moral Character					
Teaching methods	2	12.252	66.586	0.001	.877
Moral intensity	1	13.122	71.315	0.001	.930
Teaching methods*moral intensity	2	1.835	9.972	0.004	.666
error	114	0.184			
total	120				

*significant at the 0.001 level

Table 9: Simple Effect Analysis

Dependent Variable: Moral Sensitivity

moral intensity		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
1.00	Contrast	12.302	2	6.151	46.133	<.001	.902
	Error	1.333	116	.133			
2.00	Contrast	9.708	2	4.854	36.406	<.001	.879
	Error	1.333	116	.133			

Dependent Variable: Moral Judgment

moral intensity		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
1.00	Contrast	8.802	2	4.401	29.340	<.001	.854
	Error	1.500	116	.150			
2.00	Contrast	8.667	2	4.333	28.889	<.001	.852
	Error	1.500	116	.150			

Dependent Variable: Moral Motivation

Moral intensity		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
1.00	Contrast	8.177	2	4.089	19.240	<.001	.794
	Error	2.125	116	.213			
2.00	Contrast	3.542	2	1.771	8.333	.007	.625
	Error	2.125	116	.213			

Dependent Variable: Moral Character

Moral intensity		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
1.00	Contrast	22.967	2	11.483	62.409	<.001	.926
	Error	1.840	116	.184			
2.00	Contrast	5.208	2	2.604	14.153	.001	.739
	Error	1.840	116	.184			

Significant at 0.00 levels

Table 10: Multiple comparisons

Dependent Variable: Sensitivity							
						95% Confidence Interval for Difference[b]	
moral intensity	(I) teach_methd	(J) teach_methd	Mean Difference (I-J)	Std. Error	Sig.[b]	Lower Bound	Upper Bound
1.00	.00	1.00	-1.833*	.333	<.001	-2.576	-1.091
		2.00	1.000*	.333	.013	.257	1.743
	1.00	.00	1.833*	.333	<.001	1.091	2.576
		2.00	2.833*	.298	<.001	2.169	3.498
	2.00	.00	-1.000*	.333	.013	-1.743	-.257
		1.00	-2.833*	.298	<.001	-3.498	-2.169
2.00	.00	1.00	-2.833*	.333	<.001	-3.576	-2.091
		2.00	-1.500*	.333	.001	-2.243	-.757
	1.00	.00	2.833*	.333	<.001	2.091	3.576
		2.00	1.333*	.298	.001	.669	1.998
	2.00	.00	1.500*	.333	.001	.757	2.243
		1.00	-1.333*	.298	.001	-1.998	-.669

Dependent Variable: Judgment							
						95% Confidence Interval for Difference[b]	
moral intensity	(I) teach_methd	(J) teach_methd	Mean Difference (I-J)	Std. Error	Sig.[b]	Lower Bound	Upper Bound
1.00	.00	1.00	1.388E-16	.354	1.000	-.788	.788
		2.00	2.167*	.354	<.001	1.379	2.954
	1.00	.00	-1.388E-16	.354	1.000	-.788	.788
		2.00	2.167*	.316	<.001	1.462	2.871
	2.00	.00	-2.167*	.354	<.001	-2.954	-1.379
		1.00	-2.167*	.316	<.001	-2.871	-1.462
2.00	.00	1.00	-2.333*	.354	<.001	-3.121	-1.546
		2.00	-.333	.354	.368	-1.121	.454
	1.00	.00	2.333*	.354	<.001	1.546	3.121
		2.00	2.000*	.316	<.001	1.295	2.705
	2.00	.00	.333	.354	.368	-.454	1.121
		1.00	-2.000*	.316	<.001	-2.705	-1.295

Dependent Variable: Motivation							
						95% Confidence Interval for Difference[b]	
moral intensity	(I) teach_methd	(J) teach_methd	Mean Difference (I-J)	Std. Error	Sig.[b]	Lower Bound	Upper Bound
1.00	.00	1.00	-1.250*	.421	.014	-2.188	-.312
		2.00	1.083*	.421	.028	.146	2.021
	1.00	.00	1.250*	.421	.014	.312	2.188
		2.00	2.333*	.376	<.001	1.495	3.172
	2.00	.00	-1.083*	.421	.028	-2.021	-.146
		1.00	-2.333*	.376	<.001	-3.172	-1.495
2.00	.00	1.00	-1.667*	.421	.003	-2.604	-.729
		2.00	-1.333*	.421	.010	-2.271	-.396
	1.00	.00	1.667*	.421	.003	.729	2.604
		2.00	.333	.376	.397	-.505	1.172
	2.00	.00	1.333*	.421	.010	.396	2.271

		1.00	-.333	.376	.397	-1.172	.505

Dependent Variable: Character

moral intensity	(I) teach_methd	(J) teach_methd	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
1.00	.00	1.00	-2.533*	.392	<.001	-3.406	-1.661
		2.00	1.333*	.392	.007	.461	2.206
	1.00	.00	2.533*	.392	<.001	1.661	3.406
		2.00	3.867*	.350	<.001	3.086	4.647
	2.00	.00	-1.333*	.392	.007	-2.206	-.461
		1.00	-3.867*	.350	<.001	-4.647	-3.086
2.00	.00	1.00	-1.667*	.392	.002	-2.539	-.794
		2.00	-1.110E-16	.392	1.000	-.872	.872
	1.00	.00	1.667*	.392	.002	.794	2.539
		2.00	1.667*	.350	<.001	.886	2.447
	2.00	.00	1.110E-16	.392	1.000	-.872	.872
		1.00	-1.667*	.350	<.001	-2.447	-.886

*. The mean difference is significant at the .05 level.

Table 11: Post-Hoc Tests

Dependent variable: Moral Sensitivity

Teaching method	N	Subset 1	2
.00	40	3.2500	
2.00	40	3.5000	
1.00	40		5.5833

Dependent variable: Moral Judgment

Teaching method	N	Subset 1	2	3
2.00	40	3.0833		
.00	40		4.0000	
1.00	40			5.1667

Dependent variable: Moral Motivation

Teaching method	N	Subset 1	2
.00	40	3.3750	
2.00	40	3.5000	
1.00	40		4.8333

Dependent variable: Moral character

Teaching method	N	Subset 1	2	3
2.00	40	2.3333		
.00	40		3.0000	
1.00	40			5.1000

Auditing Ethics Education, Moral Intensity and Accounting Students' Ethical Decision-Making: An Experimental Study

Abstract

Building on Contingency Theory, this study investigates the effects of contingent factors—such as situational factors like teaching auditing ethics and the methods used (active vs. passive)—and cognitive factors like moral intensity on accounting students' moral decision-making (i.e., moral sensitivity, moral judgment, motivation, and moral character). A 2x2 factorial experimental design was employed to test the research hypotheses. The ANOVA results revealed that teaching auditing ethics alone do not fully explain ethical behavior. However, when combined with teaching methods and moral intensity, it significantly affects ethical decision-making. Specifically, a simple effects analysis indicated that active teaching methods are superior to passive ones in raising students' awareness of the complexity of ethical dilemmas and the importance of acting ethically, especially when faced with high-materiality ethical issues. The findings also revealed that passive teaching methods, such as traditional lectures and readings, have an impact on students' moral decision-making similar to not teaching auditing ethics at all. Practical and public policy implications are discussed.

Keywords: Auditing ethics, professional ethics, accounting education, moral intensity, moral development.

1. Introduction

This study investigates the influence of teaching auditing ethics on ethical decision-making process of students preparing to practicing the accounting and auditing profession. In light of the increasing high-profile financial scandals and ethical lapses in auditing that caused significant financial and reputational damage to auditors worldwide (Sargiacomo et al., 2024; Ajayi-Nifise et al., 2024; Abdelhak et al., 2019; Ardelean, 2013), understanding how ethics education and the factors influencing its effectiveness impact decision-making is crucial to shaping more integrity-driven accountants.

This research endeavor aligns with the efforts of global accounting standard-setting bodies such as the International Ethics Standards Board of Accountants (IESBA) to develop professional ethical standards and frameworks to guide professional accountants (IESBA, 2023; Shanks, 2020). Adherence to these professional ethics, such as objectivity, independence and due care, requires auditors to be thorough and unbiased, leading to more accurate, unbiased and reliable audits (Rankin et al., 2024). Furthermore, for accounting educators globally, it is imperative to explore whether ethics education can help students identify ethical dilemmas and understand how to apply professional principles to address them effectively, contributing to the broader goal of fostering trust and accountability in financial reporting practices.

Accordingly, this study employs an experimental design to investigate how auditing ethics education enhance ethical decision-making of accounting students. It aims to answer these questions: Do accounting students who study auditing ethics exhibit higher ethical behavior than those who do not? Additionally, do ethical issues with high moral intensity lead to more ethical behavior than those with low moral intensity? Finally, do teaching methods (active vs. passive) influence the relationship between auditing ethics education, moral intensity, and students' ethical behavior? A 2x2 factorial experimental design was used to examine these relationships.

Contribution

Despite the growing body of research on professional ethics in the accounting field, significant research gaps remain. Bridging these gaps offers insights that represent the contribution of this study. Most of the literature focuses on the role of professional ethics in auditing practices, with relatively few studies investigating the impact of auditing ethics education on the moral judgment development of accounting students who represent the profession's future (e.g., Arfaoui et al., 2016; Brown-Liburd and Porco, 2011; Taplin et al., 2018). These studies show mixed and fragmented results. For example, using a mixed-method approach, Taplin et al. (2018) explored how role-plays help students recognize ethical dilemmas and develop ethical awareness. They found that this experiential learning technique increased students' awareness of the need to protect their professional independence. Additionally, Arfaoui et al. (2016) examined the effect of ethics education on accounting students' ethical reasoning, and their experimental results indicated that ethics education did not significantly affect moral development.

Moreover, limited research (e.g., Arfaoui et al., 2016) has explored the effectiveness of auditing ethics education in MENA (Middle Eastern and North African) countries, such as Egypt, despite their distinct cultural and socioeconomic contexts, which may lead to different outcomes. Cultural factors such as collective societal values and attitudes toward authority may influence adherence to ethical principles. Furthermore, economic conditions, including the strength and enforcement of regulations and professional norms, affect the application of ethics. The emphasis on ethics within auditing curricula in the MENA region may also play a significant role. Therefore, these factors suggest that the effectiveness of auditing ethics courses in these countries may differ from that in other regions.

Furthermore, ethical decision-making is influenced by various factors beyond ethics instruction. It is a complex process affected by many individual, cognitive and situational factors. In this context, Contingency theory can offer a robust lens for identifying these influences (Schweikart, 1992). Contingency Theory emphasizes that there are specific circumstances (or *contingencies*) that affect the right decision or plan in any given situation. It argues that there is no "one size fits all" strategy or decision. The right decision depends on the internal and external factors in a given context. Therefore, achieving effectiveness requires developing strategies that align with these contextual factors. Accordingly, contingency theory can be the underpinning theoretical

framework for identifying and examining the variables that interact to influence ethical decision-making.

In light of the above, previous studies suggest that ethical behavior is contingent on the interaction of several factors rather than a single influence. These factors include individual traits such as personal values (Yulianti et al., 2024), cognitive aspects like the severity of the ethical dilemma or moral intensity (e.g., Shafer et al., 2001), situational factors such as whether ethics are taught actively or passively (e.g., Hettler and Stevens, 2024; Taplin et al., 2018; O'Leary, 2012). Environmental factors, including organizational culture (Jamil et al., 2024) and regulatory and legal contexts, also impact ethical behavior. Therefore, contingency theory can serve as the theoretical underpinning for studying how teaching auditing ethics impacts ethical decision-making, as it highlights the effectiveness of teaching ethics depends on situational factors.

This study will focus on examining the effect of situational factors like the teaching approach used in teaching auditing ethics—passive or active, and cognitive factors such as moral intensity on students' ethical decision-making. Moral intensity, an ethical issue's perceived importance or seriousness, is particularly relevant in educational settings (Jones, 1991). Accounting students are taught to assess the significance of an issue, often through the concept of "Materiality" (Arens et al., 2017). Since professional ethics is also a key part of the curriculum, moral intensity and professional ethics are expected to interact and shape students' moral judgment. Moreover, examining the effects of teaching approach of teaching ethics on ethical-decision-making is imperative because the teaching approach can affect the learning outcomes; for example interactive approaches might help students become more aware of ethical dilemmas and their consequences, supporting stronger ethical reasoning skills.

Furthermore, previous studies examined the individual effect of teaching ethics, teaching methods and moral intensity on moral decision-making. However, they have not explored the combined impact of these factors on ethical behavior. These factors do not work in isolation but interact in real life, creating a synergetic effect. Therefore, building on contingency theory, in the context of this study, ethical decision-making is contingent on the interaction of teaching auditing ethics with moral intensity and teaching approaches. The theory supports examining how different contexts (e.g., varying levels of moral intensity) influence the effectiveness of ethical education. It also accommodates the idea that the success of an intervention, like teaching auditing ethics, depends on how it is implemented (e.g., active vs. passive methods). This aligns with contingency theory's focus on situationally appropriate strategies.

In light of the above, this study's primary contribution lies in exploring the individual and joint causal effects of cognitive factors, such as professional ethics knowledge and moral intensity, and situational factors, like teaching methods, on accounting students' ethical decision-making. The results are expected to extend the contingency theory in accounting by identifying the contingent factors influencing accounting students' ethical decision-making process. Additionally, the study contributes to the ongoing discourse on improving audit quality and

enhancing fraud defenses, ultimately reinforcing the principles of transparency and confidence in financial reporting by preparing future auditors for real-life situations that may challenge their independence and due care. Also, the study will examine these relationships in a MENA country, specifically Egypt. This research will enhance our understanding of how the effectiveness of teaching professional ethics may vary across different regional contexts. The focus on students as the research population is based on the study's premise to examine the effect of teaching auditing ethics on the moral development of accounting students. This would allow for a deeper understanding of the impact of ethics education, as mandated by accredited institutions for business schools and other fields. Finally, the research offers guidance to universities and professional bodies worldwide in refining their curricula to cultivate both technical expertise and ethical integrity.

The remainder of this study is organized as follows: sections two and three present the theoretical background and literature review. Section four explains the methodology. Section five presents the results. Finally, the discussion of results, implications, and future research venues are discussed in the last section.

2. Theoretical Background

2.1. The landscape of ethics in the accounting profession and education

- ***Ethics in Professional Accounting Standards and Principles***

Accounting standard-setting bodies and professional bodies worldwide have developed ethical principles and standards to govern and guide professional accountants in facing threats to their independence. At the international level, IESBA, a standard-setting body within IFAC (International Federation of Accountants), developed a code of ethics for professional accountants, which was released in 2018 and became effective in 2019 (AICPA & CMA, April 2023). The IESBA code of ethics provides an approach for auditors to identify, evaluate and address threats to comply with fundamental principles or independence.

In the USA, CPAs must adhere to the professional code developed by AICPA (American Institute of Certified Public Accountants) in 1973. The AICPA, also a member of IFAC, has ethics standards (a code of professional conduct) that meet those of IESBA (Arens et al., 2017). The AICPA Code of Professional Conduct consists of principles, rules and interpretations. The AICPA's ethical principles that guide auditors' ethical behavior consist of the following six principles: the public interest, integrity, objectivity, independence, due care, and scope of nature of service. The principles provide the framework for the rules that govern CPAs, while interpretations show the situations where threats to compliance with the rules arise. Therefore, the AICPA's conceptual framework helps auditors evaluate threats to compliance with the principles. The framework includes identifying threats, evaluating significance, and identifying and applying safeguards (Jules and Erskine, 2018). Threats to compliance include adverse interest, advocacy, familiarity, management participation, self-interest, self-review, and undue

influence (Arens et al., 2017). Additionally, the PCAOB (Public Company Accounting Oversight Board), SEC, and the Sarbanes-Oxley Act established ethics and independence standards for auditors of public firms.

In Egypt, the ethical framework for professional accountants and auditors is governed by multiple bodies and codes, such as the codes of the SOC (Syndicate of Commerce), the FRA (Financial regulatory Authority), and the ESAA (Egyptian Society for Accountants and Auditors). The SOC, established under Law No. 4 of 1972, maintain the national registry of all professional accountants in Egypt. The SOC has developed a professional code of ethics as well as an investigative and disciplinary system for professional accountants and auditors. All professional accountants and auditors intending to practice auditing in Egypt must be registered with the Ministry of Finance (MoF) and comply with SOC's requirements to be included in this register. However, the SOC's ethical standards are more focused on disciplinary responsibilities than on broader professional ethics, as they primarily address the criteria that constitute breaches of the code (e.g., fraud) and the penalties applicable to SOC-registered accountants. Also, it is not aligned with IESBA code of ethics (World Bank, 2002).

Auditors registered with the Financial Regulatory Authority (FRA), and licensed to audit listed companies on the Egyptian Exchange (EGX) and non-banking financial institutions, are subject to ethical requirements outlined in the Egyptian Code of Ethics (ECE) (FRA, 2024). The FRA introduced this code through Decision No. 79/2007, aligning it with the IESBA Code of Ethics of 2006. However, the ECE has not been updated to incorporate the latest revisions to the IESBA Code (IFAC, 2024).

The Ministry of Investment in Egypt, along with ESAA and other stakeholders, issued the Egyptian Auditing Standards (EAS) in 2008. Established in 1946, ESAA is a professional organization dedicated to advancing and enhancing the performance of the accounting and auditing profession. It aims to promote compliance with auditing and accounting standards, as well as ethical codes, among professional accountants and auditors (ESAA, 2024). According to Resolution 554 of 2007, ESAA is mandated to raise awareness and ensure compliance among its members with international accounting standards (IFAC, 2024). The auditing standards developed by ESAA and other stakeholders include the Egyptian Ethical Framework for Assurance Services. The Ethical Framework is divided into two main sections: Section A outlines the fundamental ethical principles applicable to all professional accountants in the assurance service industry. These principles include integrity, objectivity, professional competence and due care, confidentiality, and professional behavior. Section B applies exclusively to external auditors and addresses principles of auditor independence, threats to independence, and safeguards to maintain it (Egyptian Auditing Standards, 2008).

However, these ethical requirements have not been updated since their introduction. To address this issue, ESAA in its 2024 action plan to comply with IFAC (International Federation of

Accountants) membership obligations has reported efforts to revise its ethical framework to align with the latest IESBA Code (IFAC, 2024). The ESAA monitors updates to the IESBA Code, publishes comparisons with the ECE, and encourages entities like the SOC, MoF, and FRA to incorporate these updates. Additionally, the ESAA disseminates information about the IESBA code of ethics through it is formal channel of communications, trains its members on the ECE, and educates them on the consequences of non-compliance with ethical standards.

The review of auditors' ethical principles across professional bodies and countries shows that most codes of ethics agree on specific fundamental principles, as shown in Figure 1. However, there are still differences between them in terms of interpretation, application and enforcement. The variations between countries in terms of socioeconomic and legal backgrounds may affect how seriously ethical principles are enforced.

--Insert Figure 1 about here--

- ***Ethics Courses in Accounting Curriculum***

Accounting and auditing ethics courses in the accounting curricula have undergone various evolution stages and vary significantly between various parts of the world. The attention and emphasis on teaching accounting and auditing ethics to undergraduate accounting students in many countries have been driven by many influences, including the "audit expectation gap" (Venter and van Dyk, 2024), regulations such as the Sarbanes-Oxley Act (Saxton et al., 2025), financial scandals, and mandates from educational accreditation bodies (Van de Venter, 2024). These influences have led to the introduction of either standalone ethics courses or the integration of ethics in many accounting and auditing courses at universities in both developed countries, such as the USA, and those in Europe and developing countries, including parts of Asia and Africa (Ebirim et al., 2024; Olubusola et al., 2024). For example, the SAICA (the South African Institute of Chartered Accountants) mandates integrating ethics education into the accounting curriculum (Venter and van Dyk, 2024). Additionally, global quality assurance bodies in higher education, such as AACSB, have indirectly promoted the inclusion of ethics and law courses into business school curricula. For example, the first principles of the AACSB's ten guiding principles for business schools are related to ethics and integrity. These principles is reflected in the business curriculum by including ethics courses and learning outcomes related to ethics in different core courses, e.g., auditing and assurance services (AACSB, 2004).

The inclusion of ethics in accounting curricula is still developing in the Middle East and Egypt. Significant attention is given to adhering to international accounting standards to engage with global financial markets, leading to a growing emphasis on improving ethical education (Abdulaziz, 2024). The depth and content of accounting ethics courses in Egypt and the Middle East vary significantly across countries, educational institutions, and professional organizations offering the courses (Grassa et al., 2024; Olubusola et al., 2024). This discrepancy in accounting

ethics training may compromise the professional ethical behavior of accountants and auditors (Hassan et al., 2022).

Accounting or auditing ethics are infrequently taught as standalone courses in the Middle East, typically integrated into other accounting courses. For example, auditing ethics are often covered in principles of auditing courses within bachelor's or postgraduate business programs (Abdelhak and Abdelwahab, 2021). Additionally, professional bodies like ESAA in Egypt and SOCPA (Saudi Organization for Certified Public Accountants) in Saudi Arabia incorporate ethics training into their certification processes. Accounting ethics courses are also a key part of continuing professional development for maintaining a professional license in some countries (ESAA, n.d.; SOCPA, n.d., Mihret et al., 2017).

Accounting and auditing ethics module typically cover professional ethical standards, such as the IESBA Code of Ethics, and local ethical frameworks. These standards address principles like integrity, objectivity, confidentiality, professional competence and due care, and professional behavior. Additionally, courses incorporate regulations affecting the profession, such as corporate governance and anti-corruption laws (Mah'd and Mardini, 2022). However, the focus varies; in KSA, curricula emphasize how cultural and religious values, like Islamic principles, influence ethics (Ebaid, 2022a; Ebaid, 2022b; Al-Dhubaibi, 2022), while in countries like UAE, Qatar, and Egypt, the focus tends to be on ethical issues like financial misstatements and audit quality (Bahrawe, 2024; Kassem and Omoteso, 2024; Abdelhak and Abdelwahab, 2021).

Additionally, the content of ethics training provided by professional bodies varies across the region. For instance, in Egypt, ESAA provides training courses that emphasize ethical principles for professional accountants and auditors, focusing on objectivity, independence, and the ethical marketing of professional services (ESAA, n.d.). In the UAE, the Accountants and Auditors Association (AAA) focuses on addressing ethical challenges in auditing multinational corporations (Abdallah et al., 2008). In Saudi Arabia, SOCPA incorporates ethics into certification exams, addressing Islamic finance dilemmas and auditor responsibilities under corporate governance laws (SOCPA, n.d.; Mihret et al., 2017). The Jordanian Association of Certified Public Accountants (JACPA) stresses professional conduct and adherence to international standards (Al-Qatamin & Salleh, 2020).

2.2. Ethical Decision-Making

In the accounting and auditing profession, ethical decision-making involves applying moral principles and professional standards to situations where the right course of action is unclear (Payne et al., 2020). These situations, often called ethical dilemmas, test auditors' ability to apply ethical standards effectively. This underscores the importance of ethics education in preparing students—future accountants and auditors—to identify and handle ethical dilemmas, thereby maintaining the profession's credibility and trustworthiness.

In this context, this study relies on Rest's ethical decision-making model as the theoretical framework to examine the impact of auditing ethics education on ethical decision-making (Rest, 1994). Rest's model has been employed in ethics education research to explore the complex nature of ethical behavior (Okpala and Mlanga, 2021). The model outlines four essential psychological and cognitive processes contributing to ethical behavior. These processes include moral sensitivity, which is the ability to recognize an ethical issue and assess its significance; moral judgment, which involves the capacity to determine the appropriate action; moral motivation, which refers to the commitment to prioritize ethical values over other considerations, providing the resolve to uphold these values in various situations; and moral character, which encompasses the persistence and strength necessary to follow through on ethical decisions (Klinker and Hackmann, 2004). Additionally, moral character has been defined as an individual's tendency not to surrender under pressure or be discouraged from pursuing what they believe is right (Rest and Narvaez, 1994). In accounting research, moral character is described as the courage to act ethically and implement protocols that serve ethical goals (Armstrong et al., 2003).

According to this model, an auditing ethics course can influence students' ethical decision-making in several ways. It can enhance students' moral sensitivity by exposing them to real-world accounting and auditing case studies, thereby improving their ability to identify ethical dilemmas. The course also contributes to moral judgment by facilitating discussions on various approaches and ethical frameworks developed by professional bodies. This helps students refine their capacity to make sound decisions regarding ethical dilemmas. Additionally, ethics education can strengthen an individual's courage to act ethically during an ethical dilemma and by highlighting the consequences of unethical behavior.

Nevertheless, some studies argue that moral character is deeply rooted and formed by life experiences, while others studies indicated that it can evolve over time with intentional educational efforts. For example, Loeb (1988) argues that moral character is probably beyond the reach of ethics accounting education interventions. While ethics education can influence the intent to act ethically and enhance moral sensitivity, judgment and motivation, the final component—moral character or the courage to act ethically—ultimately depends on the accountant. And for an accountant to act ethically they need courage and perseverance and such virtues are shaped by experiences and an ethical supporting environment. Nevertheless, other studies (May et al., 2014) suggest that educational settings can play a pivotal role in shaping moral character through structured interventions, like accounting ethics courses, role-playing scenarios, and critical discussions. These methods encourage self-reflection and the application of moral reasoning in real-world contexts. Furthermore, studies in moral psychology and educational research provide evidence that teaching ethics, especially through experiential and interactive methods, can positively impact moral reasoning, empathy, and ethical behavior (May and Luth, 2013). Additionally, experiential learning in auditing ethics courses can strengthen moral motivation and character. This preparation helps students understand the impact of

personal gains, organizational pressure, and societal implications on decision-making, equipping them to handle real-life pressures and instilling a solid commitment to ethical behavior (Armstrong et al., 2003).

By examining how auditing ethics education can develop or influence these components, this study aims to enhance our understanding of the role of ethics education in preparing students for the ethical demands of the auditing profession. Specifically, it will help students identify ethical dilemmas and make ethical decisions as they embark on their professional careers in accounting and auditing.

3. Literature Review

3.1. Teaching Auditing Ethics

The effect of including accounting and auditing ethics in accounting curricula has received increasing focus in the last decades because ethics education is presumed to influence the ethical judgment of accounting students (Hettler and Stevens, 2024; Martinov-Bennie and Mladenovic, 2015). Previous research argues that structured auditing ethics education enhances students' awareness of possible ethical dilemmas in auditing and the moral decisions that should be made in these situations (Bean and Bernardi, 2007). Auditing ethics education exposes students to real-life cases about ethical dilemmas and ethical decision frameworks, thus helping students to acquire ethical principles such as integrity and objectivity, which are fundamental aspects of the auditing profession (Romero-Carazas et al., 2024; Chen et al., 2023; Rezaei et al., 2024). Therefore, many studies suggested that students who received accounting and auditing ethics in their accounting curricula have a higher awareness of ethical dilemmas in accounting and auditing than those without such education. For example, early studies on ethics education show that accounting students who took an ethics course improved their ethical sensitivity and judgment (Mohamed Saat et al., 2010; Martinov-Bennie and Mladenovic, 2015). Additionally, recent studies such as that of Miller et al. (2024) showed that students could make ethical decisions they might encounter in professional life through ethics education. Okpala and Mlanga (2021) also indicated a positive relationship between accounting ethics education and accounting students' moral development.

Nevertheless, a few studies have found no impact of ethics education on students' ethical judgment. For example, Jamil et al. (2024) did not find a significant positive relationship between the accounting ethics course and the ethical behavior of Malaysian students. Moreover, the topic has rarely been examined in the Middle Eastern or Arab culture. Therefore, this study aligns with most previous studies' results that underline the importance of designing an ethics education course that enhances students' ethical decision-making in real auditing contexts and proposes the following hypothesis:

H_1: Students who receive auditing ethics education will demonstrate significantly higher levels of ethical decision-making compared to those who do not receive such education.

3.2 Moral Intensity

Moral intensity refers to the level of moral importance of an issue (Warner et al., 2024; Krisdayanti and Ratnadi, 2024). Not all situations carry the same ethical weight (Shawver and Miller, 2017). For example, financial fraud, such as embezzling large sums of money, is perceived by most individuals as more unethical than accepting a small gift from a client (Ishwara and Mekonnen, 2024). The concept of moral intensity was introduced by Jones (1991). In his ethical decision-making model, the intensity of a moral issue is evaluated using six elements:

- **Magnitude of consequences**: The degree of harm or benefit resulting from an action.
- **Social consensus**: The extent to which society agrees that an action is right or wrong.
- **Probability of effect**: The likelihood that the predicted consequences will occur.
- **Temporal immediacy**: The time between the action and the onset of its consequences.
- **Proximity**: The sense of closeness to the affected individuals.
- **Concentration of effect**: The degree to which the consequences are focused on a few individuals or dispersed across many.

The more these elements are present in a situation, the higher the moral intensity. For instance, the more severe the consequences of an issue and the more individuals affected, the higher the issue's intensity. According to Jones's model, individuals' assessments of moral intensity influence their ethical decision-making. Research has demonstrated that moral intensity affects ethical decisions (Shafer et al., 2001). For example, Letisch (2004; 2015) found that moral intensity predicts accounting students' moral judgment and intentions. Additionally, Krisdayanti and Ratnadi (2024) found that moral intensity positively influences the likelihood of whistleblowing as an ethical decision. Finally, Musbah et al. (2016) and Oboh (2019) found a positive relationship between moral intensity and ethical decision-making. Therefore, the following hypothesis is proposed:

H_2: Students exposed to a situation of higher moral intensity are more likely to make moral decisions compared to those exposed to situations of lower moral intensity.

3.3 Teaching Methods of Auditing Ethics

Some research suggests that the effectiveness of auditing ethics education can vary depending on factors such as the pedagogical approach used in teaching these courses (Jamil et al., 2024). Teaching ethical principles and standards alone may not effectively instill an ethical compass within students' decision-making frameworks. Instead, active and experiential learning styles that utilize interactive teaching methods—such as simulations, case studies, and role-playing—may foster greater student engagement and improve learning outcomes, ultimately enhancing students' ethical reasoning and judgment (Hettler & Stevens, 2024).

In line with this, O'Leary (2012) found that passive and active learning styles positively influence students' moral decision-making, but active learning styles had a more substantial impact. Additionally, Jamil et al. (2024) identified a positive relationship between active teaching methods and the ethical behavior of entry-level accounting graduates in Malaysia. Hettler and Stevens (2024) also asked students to analyze a real-world financial fraud case from the perspective of the managers responsible. They found that this kind of learning heightened students' awareness of the real-world consequences of their decisions, developing critical thinking and ethical decision-making skills that help them navigate ethical dilemmas in financial reporting.

Additionally, in light of the aforementioned research on moral intensity and ethics teaching approach, it can be argued that an active teaching approach enables students better recognize the level of moral intensity compared to a passive teaching approach. As a result, students taught through an active approach are more likely to act ethically. This interaction between the auditing ethics teaching approach and moral intensity is hypothesized because the active approach enhances students' awareness of the consequences of ethical dilemmas and strengthens their courage to act ethically. Moreover, high moral intensity reinforces these teachings by highlighting the implications of unethical behavior, thereby encouraging students to make ethical choices (Yang and Wu, 2009; Shawver and Miller, 2017).

Furthermore, active teaching methods also make moral intensity more apparent, engaging students with real-world scenarios where they must consider the ethical weight of their actions. By immersing students in dynamic situations with varying levels of moral intensity, these methods help students develop the skills needed to handle future ethical challenges. In contrast, passive learning may fail to fully capture the complexities or emotional nuances of morally intense situations. While passive teaching, such as traditional lectures, aids in knowledge acquisition, it may not provide students with the opportunity to discuss and apply that knowledge in a way that prepares them for real-world application after graduation (Porco, 2003; Ponemon and Glazer, 1990; Brown-Liburd and Porco, 2011).

To this end, it can be argued that the methods used to teach auditing ethics influence students' moral decision-making. Specifically, active teaching methods significantly enhance the effect of moral intensity on ethical decision-making compared to passive methods. Therefore, the following hypothesis is proposed:

H_3: Active teaching methods in auditing ethics enhance the positive relationship between moral intensity and students' ethical decision-making compared to passive teaching methods and the absence of auditing ethics teaching.

--Insert Figure 2 about here—

4. Methodology

4.1 Experimental Design

To investigate the direct and interaction effect of teaching auditing ethics and moral intensity on ethical decision-making, a between-subject 2*2 factorial design was adopted, as depicted in Figure 3. Additionally, a simple effect analysis was applied to examine the effect of teaching methods on the relationship between teaching auditing ethics, moral intensity and moral decision-making (Field, 2024), as shown in Figure 4. It is important to note that the effect of teaching methods (i.e., active or passive) was examined only within the "teaching auditing ethics" condition. This focus aligns with the research aim of investigating the impact of the type of ethics instruction (passive or active) on ethical decision-making. Therefore, when the teaching ethics module was absent, the "no teaching ethics" group was not divided into sub-groups, as shown in Figure 4.

A between-subject 2x2 factorial experimental design was chosen because the study involves two independent variables, each with two levels. A between-subject design, where each experimental group (illustrated in Figure 4) was exposed to a distinct experimental condition, was preferred to minimize carryover effects, which could occur if the same participants were exposed to multiple conditions (e.g., active teaching methods with low moral intensity versus active teaching methods with high moral intensity). The between-subject design eliminates the influence of prior experimental conditions on participants' responses, as each group of participants is exposed to only one experimental condition (Field and Hole, 2003).

-- Figure 3 —

-- Figure 4 --

4.2 Research Variables' Measures

The independent variables included teaching auditing ethics and moral intensity. Teaching auditing ethics was measured as a dichotomy variable. Participants were assigned to two groups: one group, "1" referring to the group that participants were taught auditing ethics, and "2" referring to the group that participants were not taught auditing ethics. To measure moral intensity, two vignettes were developed to represent high and low levels of moral intensity. The high moral intensity scenario involved participants discovering a failure to record a material sale in accounting records that could negatively impact stakeholders' decisions. The extent of the misstatement is highly material[1], raising doubts about the overall fairness of the financial statements, and most or all users' decisions based on financial statements are likely to be significantly affected. In contrast, the low moral intensity scenario presented participants with a

[1] Auditors must assess the materiality level (the significance of a misstatement) during audit planning. Materiality can be categorized into three levels based on the severity of the misstatement: high material, material and immaterial.

misclassification between cash account and accounts receivable account. This misstatement affects only those two current assets accounts and is not pervasive to the financial statements. While it is likely to affect the user's decisions if the information in question is important to the specific decision being made, the overall financial statements remain fairly stated. This misstatement represents a material issue. Regarding the moderator variable, teaching methods (i.e., Active and Passive teaching methods), it was measured as a dichotomy variable where participants were divided into two groups; one of them was taught auditing ethics using case studies, role-playing and group discussions, while the other was taught using passive teaching methods such as traditional lectures and readings. Participants in the active teaching methods group were assigned "1," while the participants in the passive teaching methods groups were assigned "2". Finally, with regard to moral decision-making, consistent with many of the prior research on accounting ethics, ethical decision-making aspects were measured by asking participants to rate their agreement with specific statement reflecting aspects of ethical decision-making on a seven-point Likert scale (e.g., Yang and Wu, 2009; Leitsch, 2015**;** Musbah et al., 2016). Therefore, measurement items were developed to reflect the four aspects of moral decision-making proposed by Rest (1986) and expanded by Jones' (1991). This study employed a multi-item approach, using two to three items per dimension, rather than the single item measure commonly used in previous research to assess the four dimension of ethical decision-making. This approach was adopted for several reasons. For example, the psychometric properties of multi-item measures are better than single-item measures (Sarstedt and Wilczynski, 2009). Also, in Arab emerging markets like Egypt, there are unique socio economic and cultural distinctions that a single-item cannot fully capture (Ried et al., 2022). Additionally, in these markets, social desirability bias often influences participants to provide socially acceptable rather than truthful answers. Further, using a single-item measure for each dimension of the four moral decision-making components may mitigate common method bias, as participants might predict the purpose of the questions and adjust their responses to align with a specific opinion (Ried et al., 2022). Therefore, a multi-item scale can help manage these biases by offering diverse questions to reduce the impact of any single skewed response.

Accordingly, moral sensitivity (recognition) was measured using two items to ask the participants whether the situation in the vignette included an ethical issue (adapted from Singhapakdi et al. 1996). Moral judgment was measured using three items that ask participants whether they agreed with "the decision maker's action" (adapted from May and Pauli 2002). Moral motivation (intention) was assessed using two items about participants' commitment to prioritize ethical values over other considerations. Finally, moral character was measured using three items that ask participants about the participants' perceived courage to act ethically. The measurement item scales were validated, as described later and in the following sections.

4.3 Materials and Instruments

A questionnaire was developed, consisting of a scenario followed by three groups of questions. With regard to the experiment's scenarios, ethical decisions and moral intensity have often been measured using vignettes originally developed by the USA Management Accountants Institute and utilized by Flory et al. (1992). These vignettes have been widely adopted in accounting ethics research. Consistent with this approach, this study developed two vignettes adapted from those used and validated in previous accounting ethics research (e.g., Oboh, 2019; Musbah et al., 2016; Cohen et al., 2001). Although the vignettes in this study are adapted from previously validated examples, substantial modifications were made for several reasons (Appendix 1).

First, the vignettes were designed to reflect two levels of moral intensity: high and low. Since one of the objectives of this study is to examine the interaction between teaching auditing ethics and moral intensity on ethical decision-making, it was necessary to manipulate moral intensity to reflect these two levels. Second, the ethical dilemmas presented in the vignettes were specifically tailored to address key auditing judgments. Auditors are required to express opinions on the fairness of financial statements based on the materiality level, which refers to the significance of misstatements in relation to the decisions of reasonable users. Accordingly, the vignettes incorporate scenarios involving the fairness of financial misstatements with varying levels of materiality, reflecting challenges commonly encountered in the Egyptian auditing environment. Finally, the names of individuals and organizations were adjusted to align with the Egyptian business context. The validity of the vignettes was rigorously assessed to ensure their content validity, as detailed later.

Six conditions were developed to examine the interaction between teaching auditing ethics, moral intensity and teaching methods and their subsequent effect on moral intention. These conditions were designed to represent varying levels of teaching ethics, moral intensity, and teaching methods. Each condition represented a specific combination of these three variables.

Condition 1: teaching auditing ethics using active teaching methods and high moral intensity

Condition 2: teaching auditing ethics using active teaching methods and low moral intensity

Condition 3: teaching auditing ethics using passive teaching methods and high moral intensity

Condition 4: teaching auditing ethics using passive teaching methods and low moral intensity

Condition 5: Not teaching auditing ethics and high moral intensity

Condition 6: Not teaching auditing ethics and low moral intensity

At the end of each vignette, participants answered three groups of questions. The first group consisted of manipulation checks questions designed to ensure that participants perceived the high moral intensity case as a high materiality ethical dilemma and the low moral intensity scenario as a simpler one (i.e., material). These questions were developed based on elements

used to evaluate moral intensity adapted from the six elements of Jones's (1991) model of moral intensity. Next, participants responded to questions designed to measure moral decision-making. Finally, demographic questions were included to gather participants' information and ensure an unbiased sample. A cover letter accompanied each scenario, explaining the purpose of the research and providing instructions on how to approach the scenarios to ensure consistency in participants' engagement.

The experimental scenarios were validated through a rigorous process of content validation, pilot testing and manipulation checks. First, content validity was established through reviewing the scenarios by two auditing professors, who have experience in the topic and experimental research. They examined the scenarios believability and reflectiveness of real-world situations. They also evaluated the level of moral intensity, whether there are significant differences between them and whether they represent high and low moral intensity situations. Based on their comments, a few sentences have been rephrased. Additionally, a pilot test was conducted with few students that represent the research population to ensure that the participants understand the scenarios clearly. Finally, manipulation checks (presented in the results section) were conducted to confirm that participants perceived and interpreted the scenarios as intended, specifically regarding the high and low moral intensity levels.

4.4 Participants and Data Collection

The research population comprises undergraduate students majoring in accounting at business schools in Egypt. The sample size was determined considering three factors (Cohen, 1992): (1) α (type 1 error), (2) statistical power, and (3) effect size. If α = 0.05, statistical power = 0.95, and expected effect size = 0.50, the minimum sample size is 15 individuals. Since we have six scenarios, we need six groups of participants; then the minimum sample size is 90 individuals (15 individuals per group).

The researcher contacted instructors of an auditing course (i.e., fundamentals of auditing) at several business schools in Egypt to request permission for their students to participate in the experiments. Due to the nature and complexity of the experiment, as well as limited resources, only two instructors, one from a private university and one from a state-owned university, agreed to participate. The researcher collaborated with the instructors to incorporate an auditing ethics module into the Principles of Auditing course. Details of the topics covered, student assessments, teaching methods, and other information included in the course syllabus are outlined in Appendix II. Students for the experiment were randomly selected from course rosters. Approximately 145 students were chosen to ensure the minimum sample size of 90 participants was met.

The selected students were then asked if they would voluntarily participate in the experiment. Those who agreed were randomly divided into two groups; one received auditing ethics instructions, and the other did not. The group receiving auditing ethics instructions was further

divided. One subgroup received two to three sessions of auditing ethics education through active teaching methods such as case studies, role-playing, and group discussions. The other subgroup was taught auditing ethics using traditional lectures and readings. After the auditing ethics education sessions were completed, students in all groups were randomly assigned related experimental scenarios. They were asked to read the scenario and answer the accompanying questions. Adequate time was provided to read the scenario and respond to the questions.

In summary, of the 145 students approached at the two business schools, 126 agreed to participate in the study. Eighty students were from the group that took the auditing ethics module, and the rest were from the group that did not take it. After students returned all the experiment materials, they were reviewed, and six were excluded due to missing data. Therefore, only the data from 120 participants were used for further analysis. Table 1 presents the sample description.

-- Table 1 --

5. Results

5.1 Manipulation checks

The manipulation of moral intensity was assessed using six questions related to the magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity, and concentration of effect. Participants' answers were significantly different across the two scenarios (high vs. low moral intensity), as shown in Table 2. Therefore, it can be concluded that the manipulation was successful.

--Table 2--

5.2. Validity and Reliability tests

An exploratory factor analysis (EFA) was applied to the data set using SPSS to check the construct validity of the dependent variable (moral decision-making). A correlation matrix was developed, as shown in Table 3. Four clusters of high correlations among the variables' items are shaded in gray in Table 3, and there is no high correlation between items that do not belong to the exact dimension of ethical decision-making. Also, the Kaiser-Meyer-Olkin (KMO) test was calculated to measure sample adequacy. The KMO value is 0.695, meaning the sample is adequate (Field, 2024). Moreover, Bartlett's test of sphericity results is significant (Chi-square 412.099, $p<.000$). Therefore, the factor analysis can be applied (Field, 2024).

--Table 3--

Table 4 shows the results of the rotated component matrix. Four factors were extracted, and the variables' items were loaded on their designated factors. The item's loadings on their designated factors are ≥ 0.5, and the cross-loadings on other factors are lower. These results are evidence of construct validity. Cronbach's alpha coefficients were used to measure reliability. Table 5 shows that all alpha coefficients are ≥ 0.7, which indicates good reliability (Field, 2024). Also, the alpha

values if an item was deleted do not enhance the overall reliability. No items were deleted. Table 6 presents the descriptive statistics for the experiment's variables.

--Table 4--
--Table 5--
--Table 6--

5.3 Testing Research Hypotheses

A two-way ANOVA analysis examined the impact of teaching auditing ethics, moral intensity and moral decision-making (sensitivity, judgment, motivation and character). The ANOVA assumptions (i.e., normality and homogeneity of variance) were examined to ensure they were met so the ANOVA could be applied. Normality was assessed using Z scores to check whether data was normally distributed (Field, 2024). Skewness-related Z scores are close to zero (sensitivity= .975, judgement=.882, motivation = .922, character = .953); thus, there is no skewness. Also, kurtosis-related Z scores (sensitivity= .075, judgement=.092, motivation = .072, character = .054) range between +1.96 and -1.96; therefore, there is no kurtosis. The homogeneity of variance was tested using Levene's test. The results of Levene's tests also are insignificant (Sensitivity F= 0.325, p = 0.25; Judgment F = 0.736, p = 0.16; F= Motivation F = 0.406, p = 0.45; Character F = 0.371, p = 0.71), which means that the assumption of homogeneity of variance was met.

Table 7 presents the results of the two-way ANOVA's main and indirect effects. These main effect results indicate whether teaching auditing ethics and moral intensity significantly affects students' moral decision-making regardless of the other factors in the research model. Additionally, the indirect effect results (teaching auditing ethics*moral intensity) show whether the effects of moral intensity depend on the level of teaching auditing ethics. In other words, the results show whether the impact of moral intensity differs depending on whether teaching auditing ethics was provided. The two-way ANOVA was run four times for one of the four aspects of moral decision-making: moral sensitivity, moral judgment, moral motivation, and moral character.

--Table 7--

Table 7 shows that teaching auditing ethics is significantly related to moral sensitivity (F = 3.744, p = 0.05, η2 = 0.238). This means that students who received auditing ethics instruction showed heightened awareness of moral issues compared to those who did not. Also, the partial eta squared results (η2) indicate that teaching auditing ethics explains 23% of the variance in moral sensitivity, which represents a large effect size. Nevertheless, teaching ethics is not significantly related to other aspects of moral decision-making, such as moral judgment, motivation and character. However, the effect size results (η2) are .003, .152, and .051 indicating small, medium, and large effects, respectively. These results partially support H_1: "*Students who receive auditing ethics education will demonstrate significantly higher levels of ethical decision-making compared to those who do not receive such education.*"

Regarding the impact of moral intensity on moral decision-making, the results presented in Table 7 also indicate that moral intensity is significantly related to the moral decision-making aspects: sensitivity (F = 15.464, p = .002, η2= .563), judgment (F = 19.294, p =.001, η2=.617), motivation (F = 14.349, p = .003, η2=.545), and character (F =4.491, p = .056, η2=.272). Also, the partial eta-squared results for the moral intensity effect on moral sensitiveness (56%), moral judgment (61%), moral motivation (54%), and moral character (27%) indicate a large effect (Field and Hole, 2003). Additionally, the results indicate that there is no significant interaction effect of moral intensity*teaching auditing ethics on moral decision-making such as moral decision-making aspects: sensitivity (F = 1.718, p = .214, η2= .125), judgment (F = 3.615, p =.082, η2=.231), motivation (F = 1.727, p = .213, η2=.126), and character (F =.017, p = .898, η2=.001). The absence of a significant interaction effect implies that moral intensity, regardless of teaching ethics, significantly affects moral decision-making. These results support H_2: *"Students exposed to a situation of higher moral intensity are more likely to make moral decisions compared to those exposed to situations of lower moral intensity."* Therefore, H_2 is accepted.

The effect of teaching methods on the relationship between teaching ethics, moral intensity and moral decision-making was examined using two-way ANOVA. The results are shown in Table 8. The effect of teaching methods on moral decision-making aspects: moral sensitivity (F =67.589, p =<.001, η2=.931), moral judgment (F =43.559, p =<.001, η2=.897), moral motivation (F =16.973, p =<.001, η2=.772), and moral character (F =66.567, p =<.001, η2=.877) were significant, and the effect sizes were all substantial indicating that teaching auditing ethics methods explain a great percentage of the variance in the moral decision making: 93% of moral sensitivity, 89% of moral judgment, 72% of moral motivation, and 87% of moral character. Furthermore, the interaction of teaching methods*moral intensity is significant: moral sensitivity (F =14.94, p =<.001, η2=.749), moral judgment (F =14.673, p =<.001, η2=.746), moral motivation (F =10.600, p =.003, η2=.679), and moral character (F =9.975, p =.004, η2=. 666).

Since both the teaching methods and moral intensity factors are significant within the teaching ethics condition, and the interaction effect of teaching methods*moral intensity is significant, a simple effects analysis was performed to determine how teaching methods affect moral decision-making within each level of moral intensity (high and low). The results in Table 9 reveal that at low moral intensity, there was a significant effect of the teaching method on moral decision-making: moral sensitivity (F =46.133, p = < .001), moral judgment (F = 29.341, p = < .001), moral motivation (F =19.240, p = < .001), and moral character (F = 62.409, p = < .001), with participants in the active teaching condition scoring higher on moral decision-making aspects than those in the passive teaching condition. At high moral intensity, the effect of the teaching method was significant on moral decision-making: moral sensitivity (F = 36.406, p = < .001), moral judgment (F = 28.889, p = < .001), moral motivation (F =8.333, p = .007), and moral

character (F = 14.153, p = .001), with participants in the active teaching condition scoring higher on moral decision-making aspects than those in the passive teaching condition.

--Table 8--
--Table 9--

Finally, a post-hoc test using Tukey's HSD was performed to investigate the effect of teaching auditing ethics methods at each level of moral intensity on moral decision-making. The post-hoc tests compared the means of the active and passive teaching methods and the group that did not receive auditing ethics instructions to see which groups differed (Table 10). The test results in Table 11 reveal significant differences at the 0.05 level between the teaching methods. The active teaching method (M = 5.583) is the most effective for improving moral sensitivity among the methods tested, while passive teaching methods (M = 3.500) and no teaching auditing ethics (M=3.250) groups have similar but less effective impacts. Also, the active teaching method (M=5.100) has the most significant impact on moral judgment, while the passive teaching method (M=3.083) is the least effective. No ethics education group (M = 4.000) falls in between, showing moderate impact. Moreover, active teaching methods (M = 4.833) show the most substantial impact on moral motivation. In contrast, the no teaching ethics (M = 3.375) has the lowest mean, and the passive teaching method (M =3.500) falls in between but is not significantly different from the no teaching ethics method. Finally, active teaching methods (M = 5.100) are the most effective for improving moral character, while passive teaching methods (M = 2.333) are the least effective. No teaching ethics (M = 3.000) has a moderate level of impact and falls in between the other two methods. In conclusion, the group taught using active teaching methods significantly differs from the passive teaching methods group and the group that did not receive auditing ethics instruction. In contrast, the passive teaching methods group is similar to the group that did not study auditing ethics across all four aspects of moral decision-making: moral sensitivity, judgment, motivation and character. Accordingly, the active teaching methods are the most effective for improving moral sensitivity among the teaching methods examined, while passive teaching methods and not teaching ethics have similar but less effective effects. These results support H_3: "*Active teaching methods in auditing ethics enhance the positive relationship between moral intensity and students' ethical decision-making compared to passive teaching methods and the absence of auditing ethics teaching."* Therefore, hypothesis 3 is accepted.

--Table 10--
--Table 11—

1. Discussion and Implications

The study investigated the impact of teaching auditing ethics, moral intensity and their interaction on ethical decision-making. Additionally, it examined the moderating role of the type of teaching methods (active vs. passive) in enhancing this impact. The study contribution lies in

examining the impact of teaching methods and moral intensity on the relationship between teaching auditing ethics and ethical decision-making. The findings suggest that for auditing ethics education to influence ethical decision-making, the significance of moral intensity and the teaching approach are critical. Active teaching methods are more effective than passive methods or the absence of ethics instruction in helping students recognize ethical dilemmas and motivating them to act ethically. The specific results of these relationships are detailed below.

With regard to teaching auditing ethics without differentiating between the teaching approach (passive or active), the results reveal that teaching ethics is significantly related to moral sensitivity, but it is not significantly related to other aspects of ethical decision-making, such as judgment, motivation, and character. However, these results change when controlling for the effect of teaching methods– whether active or passive. The effect of teaching auditing ethics on ethical decision-making becomes significant across the four components of the ethical decision-making process, as explained below. The results regarding the effect of teaching auditing ethics- without controlling for the teaching approach- on ethical decision-making are partially consistent with those of Chen et al. (2023) and Martinov-Bennie and Mladenovic (2015) but differ from the results of Jamil et al. (2024). The results indicate that students who received auditing ethics instructions demonstrated heightened awareness of ethical issues in financial reporting compared to those who did not. This is logical because teaching ethics involves educating students about ethical dilemmas in auditing and instructing them on the ethical principles and standards that must be followed when addressing them. Also, the results indicate that while auditing ethics education may enhance students' sensitivity to ethical dilemmas, it may not directly influence their motivation to act ethically, their ability to make ethical judgment or their development of moral character.

Moral intensity is significantly related to all aspects of moral decision-making (sensitivity, judgment, motivation and character). These results are consistent with Shafer et al. (2001). Also, moral intensity explains a large percentage of the variance in moral decision-making because the effect size of moral intensity on moral sensitivity, moral judgment, moral motivation and moral character were all large effects. These results suggest that individuals are more likely to act ethically when confronted with a highly material ethical dilemma that affects many stakeholders, compared to when the ethical dilemma is less significant. Furthermore, the interaction between teaching auditing ethics and moral intensity is large and significantly affects all aspects of moral decision-making. This indicates that teaching auditing ethics helps students identify moral issues that are of a high material nature, and respond to them more ethically compared to those who have not studied auditing ethics. Additionally, teaching methods significantly affect all aspects of moral decision-making. This result is consistent with O'Leary (2012) and Jamil et al. (2024). This result indicates that when students learn auditing ethics through active teaching methods such as case studies and group discussions, they better understand the nature of ethical dilemmas and the importance of ethical behavior. Active teaching methods engage students more deeply in learning, leading to a firmer grasp of the issue. Moreover, the interaction between teaching

methods and moral intensity is significant and explains a large percentage of the variance in all aspects of moral decision-making. This result highlights the superiority of active teaching methods over passive ones in raising students' awareness of the complexity of ethical dilemmas and the importance of acting ethically when faced with high-materiality ethical dilemmas. The findings also revealed that passive teaching methods, such as traditional lectures and readings, have a similar effect on students' moral decision-making as not teaching auditing ethics at all. In passive teaching, students are not fully immersed in the learning process; they memorize concepts to pass the course without genuinely understanding the complex nature of ethical dilemmas or how they should address them. In some cases, passive teaching was less effective in affecting ethical decisions compared to the absence of auditing ethics instructions. This may be because, without exposure to auditing ethics instructions, students rely on their intrinsic values and cultural background. However, passive teaching may lead students to become overconfident in their knowledge of the subject, ultimately reducing their moral competency when faced with complex situations. Additionally, passive teaching may lead to an overlap between auditing ethics and other topics in auditing, thereby relegating ethics to a secondary rather than a primary issue. As a result, students might become less motivated to develop a strong foundation in auditing ethics and instead focus on other topics they perceive as more important, such as audit evidence, audit objectives and reporting. This shift in focus could diminish the impact of ethics education.

Taken together, the results indicate that teaching auditing ethics alone do not fully explain ethical behavior. However, when teaching ethics is combined with teaching methods and moral intensity, it does account for ethical decision-making. Differentiating between the methods used to teach ethics reveals the effect more clearly.

Implications

Theoretical implications

Auditors' compliance with ethical principles and standards is complex and influenced by various cognitive, institutional, contextual and personal factors. This study focused on specific cognitive factors, i.e., knowledge acquired through education and moral intensity. The results reveal that future accountants and auditors are more likely to comply with ethical standards if taught auditing ethics, primarily through active teaching during their undergraduate studies. These results affect behavioral accounting and auditing research by understanding how professional ethics programs and moral intensity may influence future accountants' behavior. Therefore, it can expand theories like contingency theory in accounting by demonstrating contingent factors' influence on accountants' moral decision-making.

Empirical implications

The results of studying the relationship between professional ethics education and moral decision-making highlight how accounting educators should connect critical topics taught in

auditing education, such as materiality and professional ethics, for students to enhance their future professional performance. The results suggest that a strong education in these areas, primarily through active teaching methods, can enhance future auditors' ethical decision-making in real-world situations requiring moral judgment. Additionally, integrating professional ethics modules in auditing and all accounting courses will help students identify ethical dilemmas across various aspects of accounting and enhance their moral judgment when addressing them. Furthermore, accounting educators should rely more on active (e.g., simulations, case studies, and role-playing) than passive teaching methods (traditional lectures and readings) to better equip students to effectively address ethical dilemmas in real-life situations. The timing and frequency of ethics courses can influence outcomes, with continuous and integrated ethics instruction proving more beneficial than standalone courses. Finally, these results can encourage organizations to have professional ethics education programs for their internal accountants and auditors to enhance corporate governance and reduce non-compliance with regulations and standards risks.

Public policy implications

Regulators and professional organizations such as IAESB and FASB (Financial Accounting Standards Board) at the international level or the Financial Regulatory Authority (FRA) and the Egyptian Society of Accountants and Auditors (ESAA) at the Egyptian level could adopt mandatory ethical training programs and advocate for the integration of professional ethics education in continuing professional education for accountants and auditors. These education and training programs would heighten accountants' awareness of moral issues and behavior, leading to high-quality audits and more reliable financial statements.

Future research

The study focused solely on teaching ethics, moral intensity, and teaching methods. Other variables, such as organizational climate, the maturity of financial markets, and law enforcement, should also be examined. Additionally, personal values and industry types must be considered. Given variations in institutional and regulatory environments, replicating the study in different cultures may yield different results. The duration of ethics instruction could also influence the outcomes, potentially leading to improved or different findings. Future studies could also explore whether the results of this study vary between males and females. The study can be replicated in the context of external auditors to assess the transferability of these findings to professional contexts. Finally, longitudinal studies can be conducted to evaluate whether students' intentions to act ethically are sustained in professional environments.

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Appendix

Vignette 1:

Nabil Ahmed is a senior auditor working for a large audit firm working in Egypt. Nabil was assigned by the audit partner, Mr. Ayman Shawky, CPA, to audit the accounts receivable, as a part of the sales and collection cycle, for one of the largest, listed corporation operating in construction and urban development that is required to have an annual audit of its financial statements to comply with regulatory requirements and to provide assurance to its shareholders and other stakeholders.

During the current year's audit, Nabil detected a misclassification between cash account and accounts receivable account, the corporation's personnel debited cash for a non-cash sale. Based on his judgment, Nabil determined that the amount of that misstatement justifies the issuance of a qualified opinion, particularly as the client's management did not respond to correct this misstatement.

Nabil discussed the issue with Mr. Ayman, who told him that this type of misstatements does not overshadow the financial statements as a whole, since both cash and accounts receievable are considered current assets, therefore the effect of the misstatement is not pervasive and the overall financial statements are still fairly presented. Accordingly, Mr. Ayman decides that there is no need to issue a qualified opinion audit report, and told Nabil that this matter does not require a dispute with the client, especially, since it represents a significant source of revenue for their audit firm.

Decision: Nabil agrees with Ayman's decision not to modify the opinion in the audit report (i.e., to issue unmodified audit report).

Vignette 2:

Ahmed Hassan, CPA, has over 20 years of experience in auditing, accounting, and financial reporting. One of Ahmed's major clients is ABC Manufacturing, a listed medium-sized company that specializes in pharmaceutical and chemical industries. ABC Manufacturing is required to have an annual audit of its financial statements to comply with regulatory requirements and to provide assurance to its shareholders and other stakeholders.

While Ahmed was doing the current year audit of ABC's financial statements, he detects an unbilled shipment, the company's personnel failed to record a material non-cash sale. Ahmed informs the CFO to correct this misstatement. The CFO tells him that this sale took place near the end of the year, coinciding with the company achieving unprecedented profits for the current year, and due to the expiration of the tax exemption period that the company had, there is a need to delay the revenue recognition for this transaction to the next year. Also, the CFO hints to Ahmed that the CEO is aware of this matter.

At home on the weekend, Ahmed discusses the situation with his wife, Shahd, an internal audit manager of another company. "They are asking me to ignore a misstatement that is likely to affect the users' decisions based on financial statements" he says. Shahd tells him that companies do this all the time, and this matter can be settled next year, especially since it is related to a non-cash (on credit) sale. Also, she reminds him how important the fees he charges from that client are in maintainimg their comfortable lifestyle, and that he should not do any thing that might cause him to lose his client.

Decision: Ahmed decides to ignore this misstatement when expressing his opinion in the audit report.

1. Please indicate your response to each statement using the specified Likert-type scale from 1 to 7, where the scale is labeled according to the context (e.g., significant, agreement).

Items			
1. Magnitude of Consequences	*"How significant do you believe the consequences of the decision would be for those affected?"*	1 (Not significant)	7 (Extremely significant)
2. Social Consensus	*"To what extent do you believe most people would agree that the decision is morally right or wrong?"*	1 (Strongly disagree)	7 (Strongly agree)
3. Probability of Effect	*"How likely do you believe the decision will lead to the expected outcomes?"*	1 (Very unlikely)	7 (Very likely)
4. Temporal Immediacy	*"How quickly do you believe the consequences of the decision will occur?"*	1 (Not quickly)	7 (Very quickly)
5. Proximity	*"How personally connected do you feel to those affected by the decision?"*	1 (Not connected)	7 (Very connected)
6. Concentration of Effect	*"To what extent do you believe the impact of the decision will be concentrated on a few people versus spread across many?"*	1 (Concentrated on a few)	7 (Spread across many)

2- Moral decision-making

Please indicate your level of agreement with the following statements using a likert scale ranging from **1** (totally disagree) to **7** (totally agree):

A. Moral Sensitivity

Sen. 1. This case represents an ethical dilemma.

Sen. 2. I understand there are potential significant negative consequences for stakeholders if the misstatement detected is ignored when forming an opinion in the audit report.

B: Moral Judgment

Jud. 1. I believe that the issuance of a *modified opinion audit report*, despite the risk of losing the client, is the most ethical decision.

Jud. 2. I believe that the decision made is the most appropeiate approach.

Jud. 3. I think negotiating with the client to find a middle ground that avoids a *modified opinion* but ensures corrective action in the next year is a balanced ethical decision.

C: Moral Motivation

Mot. 1. I would *modify* the audit opinion, even if it results in losing the client and negatively impacting my audit firm's revenue.

Mot. 2. I support prioritizing the ethical obligation to correct the misstatement that is detected over maintaining a profitable client relationship.

D: Moral Character

Chr. 1. I am confident in my ability to act ethically and *modify* the audit opinion, even under pressure.

Chr. 2. I am prepared to face any personal or professional repercussions from issuance a *modified audit opinion*, including potential loss of the client.

Chr. 3. I am willing to uphold ethical standards and take action to address the misstatement, despite any adverse impact on my audit firm's relationship with the client.

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Appendix II-The auditing ethics education Module:

Lectures	Topic	Professional Ethics Standards
Session One: Lectures One and Two	- Introduction to Auditing Ethics - Special need for ethical conduct in professions - Rationalizing unethical behavior. - Ethical dilemmas - Code of professional conduct	- AICPA Code of Professional Conduct - Egyptian Auditing Standards
Session Two: Lectures Three and Four	- Independence - Independence rule of conduct interpretations - Other rules of conduct (e.g., Confidentiality – Integrity and objectivity- Conflicts of interest)	- AICPA Code of Professional Conduct - IFAC Code of Ethics for Professional Accountants - Egyptian Auditing Standards
Session Three: Lectures Five and Six	- Enforcement - Ethical challenges in auditing - Framework for resolving ethical dilemma	- AICPA Code of Professional Conduct - PACOB and SEC - In Egypt, FRA (Quality Control Unit for Registered Auditors)
• Instructional Methods: o Combination of lectures, case studies, role-playing, and group discussions. o Interactive learning activities like debates or mock audit scenarios have been used to help students practice ethical decision-making.		
• Assessment Methods: o Written exams, assignments, or case study analyses focused on ethical dilemmas. o Evaluation of participation in discussions and reflection on ethical scenarios.		
Reading materials: - Arens, A. A., Elder, R. J., & Beasley, M. S. (2017). *Auditing and assurance services: An integrated approach* (16th ed.). Pearson. - Arens, A. A., Elder, R. J., Beasley, M. S., & Hegazy, M. (2013). *Auditing and assurance services* (Arab World ed.). Pearson. - Elder, R. J., Beasley, M. S., Arens, A. A., & Hogan, C. E. (2010). *Auditing and assurance services: An integrated approach*. Pearson.		

Gender effects on ethical decision-making dimensions

Variable	t-statistics	df
Moral Sensitivity	0.875	118
Moral Judgment	1.131	118
Moral Motivation	-0.987	118
Moral Character	1.134	118

All t-statistics are not significant at the Critical t-Value ($\alpha = 0.05$, two-tailed)