

Ethics and accounting education: does teaching stand-alone religious courses affect accounting students' ethical decisions?

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Received 3 July 2021
Revised 13 August 2021
4 September 2021
10 September 2021
Accepted 11 September 2021

Abstract

Purpose – Undergraduate accounting program at Umm Al-Qura University in Saudi Arabia is a unique case. The program includes 147 credit hours of which 28 credit hours are religious courses. This study aims to examine the effect of teaching these religious courses on students' ethical perceptions and decisions.

Design/methodology/approach – A survey was conducted for a sample of accounting students at Umm Al-Qura University. The sample was divided into two groups; the first group includes students who did not study religious courses, while the second group includes students who study religious courses. The questionnaire contained three groups of questions that aimed to explore students' perceptions of ethics in general, students' perceptions of business ethics and explored their ethical attitudes regarding some accounting decisions that involve ethical dilemmas. Independent two-sample t-test and multiple regression analysis were used to determine whether the responses of the two groups were significantly different.

Findings – The findings of the study revealed that teaching religious courses led to an improvement in students' perception of business ethics and an improvement in students' ethical decision-making. However, the results of the independent sample t-test showed that this improvement was not significant. The results of the study also revealed that male students tend to make less ethical decisions than female students.

Research limitations/implications – The findings offer an indication for those responsible for managing the accounting program at Umm Al-Qura University to start developing the program so that some of the general religious courses are replaced with specialized courses in accounting ethics that focus directly on ethical dilemmas faced by the accountant when practicing the accounting profession.

Originality/value – This study contributes to the current literature related to examining the effect of teaching ethics courses on the ethical perception of accounting students by focusing on accounting students in Saudi Arabia as a context that has not been examined before.

Keywords Accounting education, Ethics, Accounting students, Saudi Arabia

Paper type Research paper

Introduction

Today's business environment has become more complex than ever. The number of stakeholders has increased and their information needs have increased as a result of the diversity of economic decisions. Financial reports are one of the primary sources that stakeholders (e.g. investors, lenders, employees, suppliers, business creditors, customers, government, etc.) rely on to obtain financial information that they use in making economic decisions. The responsibility for preparing financial reports rests with accountants who exercise their judgments in several accounting issues. Accordingly, it is not possible to separate the technical side of accounting from the values and attitudes of accountants in exercising their judgments. To provide valid and usable financial reports to stakeholders, accountants as presenters of these reports must maintain ethical principles. [Anzeh and Abed \(2015\)](#) point out



that any unethical conduct in accounting practice will, in any way, cause failure in the economic system. Thus, the healthy economic system requires accounting professionals committed to ethical values. [Abbaszadeh et al. \(2012\)](#) indicate that in the globalization of business, ethical accounting principles are not considered a problem of a particular society, but rather a global problem. This indicates the pivotal role that the accountants play in maintaining the sustainability of the company and society as a whole. Misrepresentation of facts and figures by accountants has a significant impact on the company and the economy in which the company is located.

Despite the existence of code of ethics issued by professional bodies, the financial scandals resulting from the unethical behaviors of accountants are still continuing. Well-known scandals of one of the major leading accounting firms in the United States Arthur Andersen coupled with alleged unethical acts committed by Enron, Adelphia Communications, Dynegy, WorldCom and Tyco have aroused the conscious of the public and stakeholders as to the moral decline and unethical posture of public accountants unveiled a decline in moral reasoning and ethical standards of public accountants ([Dellaportas, 2006](#); [Esmond-Kiger, 2004](#)). These accounting scandals led to a focus on accounting ethics and the need to review accounting ethics education in universities. Unethical behavior among public accountants calls for an improvement in accounting education to ensure the integration of ethics into accounting curricula ([Desplaces et al., 2007](#)). Accounting today is no longer a systematic process of recording, classifying, summarizing and reporting transactions, but is related to the complex cycle of data processing with the possibility of manipulating the information received and issued. The existence of code of ethics in itself does not guarantee the presentation of sound and appropriate financial reports. The financial scandals that occurred were not only caused by errors in the application of technical methods of accounting, but there are many of these scandals resulting from the exercise of unethical judgments ([Brooks and Dunn, 2018](#)). Hence, when preparing accounting students for their role as professionals in the future, universities should not only focus on technical knowledge of the accounting, but must train students to take ethical aspects into account when exercising judgments ([Mourik and Wilkin, 2019](#)). Because ethical misconduct has led to financial scandals and a shake of confidence in the accounting profession, the goal of accounting education should be to shape the character of potential accountants and graduate accountants with high ethics and integrity when practicing the profession after graduation, leading to maintaining public confidence in accounting profession ([Fang and Foucart, 2014](#); [Low et al., 2008](#); [Sharp, 2006](#)).

Recently, ethics has become a major concern in accounting education research. One of the research streams in ethics education in accounting is the stream which tends to examine the effect of teaching ethics courses on students' ethical attitude. The main idea of this research stream is that ethical thinking is a generic competence, and ideally should be part of the accounting curricula. Ethics education, when properly incorporated into accounting curricula, can make a difference in the attitude and behavior of accounting students who are the future professional accountants ([Nadaraja and Mustapha, 2017](#); [Ellis, 2013](#); [O'Leary, 2009](#); [Blanthorne et al., 2007](#); [Caliyurt and Crowther, 2006](#); [Bampton and Maclagan, 2005](#)).

Although teaching ethics has been suggested in the literature as a tool to enhance ethical perception and ethical decision-making for accounting students in developed countries, this issue remains unexplored in most developing countries. Accordingly, the purpose of this study is to investigate the impact of instruction in ethics on ethical decisions of accounting students in Umm Al-Qura university in Saudi Arabia as one of developing countries. In fact, this study contributes to the literature from several aspects. First, accounting education in Saudi universities is a special case, as accounting curricula in all Saudi universities do not

include a specialized course in accounting ethics. Instead, the accounting curricula in Saudi Arabia universities include a set of Islamic religious courses that the student obtains as a university requirement. Second, Umm Al-Qura University, which is one of the oldest and largest Saudi universities, is considered a special case in Saudi universities in terms of the number of religious courses, where the student studies 14 courses in the Islamic religion in his/her study plan. These attributes of accounting education in Saudi Arabia, especially Umm Al-Qura University, show the importance of studying the impact of teaching these religious courses instead of teaching a specialized course in accounting ethics on accounting students' ethical decisions. Third, this study examines the effect of teaching ethics courses on accounting students' ethical decisions in a new context that has not been studied before, which is the Saudi context. Fourth, Saudi Arabia has adopted International Financial Reporting Standards (IFRS) from the fiscal year starting on 1/1/2017. Given that IFRS are principles-based standards, which provide a greater opportunity for accountants to exercise judgment when preparing financial statements, the understanding of accountants' proper ethical behavior is not only needed but necessary. To achieve the purpose, the remainder of the study was organized as follows. The next section presents the literature related to the effect of teaching ethics on the ethical awareness of accountant students, followed by the background and the research hypothesis. Then the research methodology is provided, followed by the analysis and results, while the last section presents the conclusion and recommendations.

Literature review

Accounting students' perceptions of ethics

Ethics is crucial to developing any profession and improving its image in society. In fact, accounting is a profession that relies heavily on the judgment of the professional who practice it (Park and Blenkinsopp, 2013). Accountants play a pivotal role in business by preparing high-quality financial reports and providing interest groups with reliable financial information (Ismail, 2014). This suggests that the role of the accountant is pivotal to the sustainability and going concern status of organizations and invariably the society. An accountant who commits fraud not only harms his/her moral existence, but also endangers the interests of stakeholders who represent a broad spectrum of society (Okougbo et al., 2021). Therefore, ethical behavior is an important characteristic of accountants. Ethical behavior requires the accountant to have an ethical attitude. According to Stonciuviene and Naujokaitiene (2013), improper ethical attitude can direct accountants toward unethical behavior. In support, Busila (2014) noted that the mere existence of a code of professional conduct does not guarantee that an accountant will act ethically. Therefore, it is necessary to understand the ethical decision-making process as a large proportion of professional judgment depends on the ethical beliefs and attitudes of the individual. The occurrence of financial scandals around the world in recent decades, most of which resulted from the unethical behavior of accountants, led to an increase in calls for an enhanced understanding of ethical issues in accounting. Likewise, this led to an increased focus on analyzing the extent of universities' commitment to integrating these ethical issues in the accounting curricula with the aim of graduating accountants with sound ethical attitudes and values (Courtney, 2011). It is important to find accounting graduates who are largely equipped with technical knowledge, and are adequately prepared to deal with the ethical issues of the accounting profession (Dellaportas and Hassall, 2013). Considering that accounting students today are the professional accountants in the future, previous studies focused on examining the ethical attitudes of accounting students as an early indicator of the behaviors they are expected to practice when working after graduation. However, these studies reached conflicting results. Some studies have shown the weakness of the ethical perception of

accounting students. For example, [Cohen et al. \(2001\)](#) indicated poor students' performance on three issues: moral awareness, moral orientation and the intent to perform questionable actions. [Chan and Leung \(2006\)](#) showed that most accounting students have a weak ability to detect the presence of ethical issues in the professional scenarios presented to them. [Jooste \(2010\)](#) found that accounting students tended to judge earnings management practices more ethically than business managers did. [Purnamasari \(2011\)](#) showed that accounting students had higher probability to accept the offer to violate the existing ethics and not to tell anyone. [Pusti \(2017\)](#) found that students' perception of accounting ethics was significantly lower than that of teachers and professionals. [Harun et al. \(2020\)](#) found that accounting students who do not have work experience have a significantly lower perception of accounting ethics compared to students who have work experience.

On the other hand, some studies have provided evidence of a high ethical awareness among accounting students. For example, [Elias \(2002\)](#), after comparing the ethical attitudes of students, faculty and certified public accountants, reported that certified accountants were more lenient than accounting students and faculty in assessing ethical behavior. Also, [Adkins and Radtke \(2004\)](#) observed that students consider business ethics more important than faculty members. [Elias \(2006\)](#) indicated that students with higher levels of professional commitment and a higher perception of the importance of financial reporting are more likely to perceive questionable actions as unethical and less likely to engage in such actions. [Koumbiadis and Okpara \(2008\)](#) concluded that accounting students understand their responsibilities and the consequences of unethical behaviors. The majority of students reported that no one should compromise ethical standards in the workplace. [Greenfield et al. \(2008\)](#) indicated that students with idealistic ethical characters are less likely to engage in earnings management. [Esa and Zahari \(2015\)](#) found that accounting students have high awareness of ethics although they believed and agreed that money is good. [Cheung \(2019\)](#) investigated accounting students' perception on the importance on 17 ethics themes and found that students rated most of these themes as important.

Some studies have tried to compare the ethical attitudes of accounting students in developing and developed countries. For example, [Venezia \(2005\)](#) found that Taiwanese accounting students possessed higher levels of ethical reasoning than students in the USA. [Chung et al. \(2008\)](#) found that American students had a greater perception of ethical problems in business and, thus, showed more interest in ethical behavior compared with students from East Asian countries (i.e. China, Korea and Japan). [Ge and Thomas \(2008\)](#) pointed out that Canadian accounting students made more ethical audit decisions than Chinese accounting students. [Abbaszadeh et al. \(2012\)](#) compared accounting students' perceptions of accounting ethics in Iran and the United Kingdom and found that accounting students in the United Kingdom had higher levels of ethical perceptions.

It is noted that these previous studies have reached mixed results regarding the ethical attitudes of accounting students. It is also noted from the results of these studies that the ethical attitudes of accounting students in developing countries were weaker than the ethical attitudes of accounting students in developed countries. These results could be an important motivation to conduct the current study. The current study attempts to contribute to this debate by examining the ethical attitudes of accounting students in a new context that has not been examined before. The importance of the current study increases by examining the ethical attitudes of accounting students in Saudi Arabia as one of the developing countries.

Impact of ethics education on students' ethical attitudes

Teaching ethics within accounting curricula has two opposing views. One view suggests that it is possible to teach ethics in the university. Proponents of teaching ethics in

accounting education believe that there are potentials to influence the thinking of accounting graduates before they enter the accounting profession. Accounting academics can influence the ethical thinking of the accounting profession by designing ethics education interventions that will be beneficial to accounting students in integrating ethical rules into the decision-making process (Low *et al.*, 2008). Accordingly, accounting education contributed to the collapse of ethics in the business world by focusing on teaching students only the technical aspects of accounting and not providing sufficient ethical education to students (Hummel *et al.*, 2018). McPhail (2001) argued that accounting ethics education is based on the principle that ethical development can be improved during the educational process. Several studies have provided empirical evidence that incorporating ethics into accounting education may have a positive impact on the ethical attitudes of accounting students. For example, Armstrong (1993) provided evidence that students who took a general ethics course attained significantly higher levels of moral sensitivity compared to students who did not take this course. Sadler and Barac (2005) indicated a significant improvement in the ethical awareness of final-year accounting students after studying a course in accounting ethics. O'Leary and Mohamad (2008) found that ethics instruction positively affected the final-year accounting students' ethical awareness. Buell (2009) found undergraduate and graduate accounting students who completed ethics courses scoring lower than students without ethics courses with respect to moral reasoning. Mohamed Saat *et al.* (2010) found that students who attended an ethics course improved significantly in their moral judgment-making ability compared to students who did not attend the course in Malaysia. Maruszewska (2011) observed that integrating ethics into accounting education enhanced students' perception regarding tax avoidance. May *et al.* (2014) find that an ethics treatment course results in a positive effect on the ethical behavior of students in the experimental group as compared to the control group. Martinov-Bennie and Mladenovic (2015) observed that the ethics framework influences students' ethical decisions, whereas an integrated ethics education course can improve the ethical sensitivity of the students. Anzeh and Abed (2015) concluded that teaching ethics in accounting curricula has a significant impact on students' ethical decisions. Costa *et al.* (2016) found that attendance of a course on ethics positively influenced the students' ethical decision-making processes. Nadaraja and Mustapha (2017) indicated that after attending the ethics classes, the moral sensitivity of final-year accounting students has improved. Shawver and Miller (2017) showed that students' perception of moral intensity has enhanced through a limited ethics intervention in an advanced accounting course. Honesty *et al.* (2019) showed that there is a difference in the perception of earnings management between the students who took and did not take the business ethics course. Mladenovic *et al.* (2019) results indicated that students developed more sophisticated and contextualized views of ethical issues in business after been exposed to an ethics education program. Montenegro and Rodrigues (2020) found that ethical perceptions of accounting students are significantly affected by accounting ethics education. Miller *et al.* (2020) found a significant impact on the students' ethical sensitivity and ethical judgment after implementing Giving Voice to Values (GVV) in accounting education. Okougbo *et al.* (2021) found that the ethics intervention curriculum has a positive impact on the ethical awareness of the students.

On the other hand, there are opponents to teaching ethics in accounting education. They argue that ethics education at the university is unnecessary because, presumably, each individual's ethical values are (and must be developed) under the supervision and influence of parents, religious institutions, school teachers and other influences. Accordingly, the ethical values of students have already been formed to a large degree by the time they reach university (Merino *et al.*, 2010; Boyce, 2008). Some previous studies provided empirical

evidence in support of this view in that the teaching of ethics in accounting education had a significant impact on the ethical decisions of students. For example, [Rogers and Smith \(2008\)](#) after comparing students' responses before and after studying a course in ethics found that there were no significant differences in students' ethical decisions. [Gammie and Gammie \(2009\)](#) concluded that accounting students who were exposed to ethical educational interventions do not show a higher level of ethical perception compared to their counterparts who were not exposed to ethical educational interventions. [Bernardi et al. \(2011\)](#) indicated no differences in accounting students' ethical decision-making that is associated with ethics education. [Arfaoui et al. \(2016\)](#) found that the progress of moral development was not significant between the pre- and the post-ethics education. In general, studies that have examined the effect of teaching ethics on the ethical decisions of accounting students have reached conflicting results. This means that the impact of teaching ethics on students' decisions is not a settled issue, which calls for more studies in this regard, which is what the current study is doing by examining the impact of teaching ethics on the ethical decisions of accounting students in Saudi Arabia.

Background and hypothesis development

Saudi Arabia is one of the Arab countries located in Asia. Saudi Arabia occupies a leading position among the Islamic countries, because of its religious position. It is the qiblah of Muslims, where all Muslims turn to it in their prayers every day, and millions of Muslims come to it to perform Hajj and Umrah. Since its founding by King Abdul-Aziz Al Saud in 1932, Saudi Arabia seeks to be a modern country while preserving its authenticity and religious status. As soon as Saudi Arabia was established, King Abdul Aziz was interested in education, whether public education or higher education. Higher education began in Saudi Arabia in 1950 in Makkah, with the establishment of the first official college specialized in Islamic Sharia to become the first university educational institution to be established in the country, and the nucleus of Umm Al-Qurra University. The establishment of specialized colleges in Makkah continued until 1981, when the establishment of Umm Al-Qura University was announced to include these colleges under one umbrella. By the end of 2020, Umm Al-Qura University includes 35 colleges and specialized institutes offering 122 bachelor's programs in all disciplines. Undergraduate accounting program is offered by the College of Business Administration. The program includes 147 credit hours distributed over four groups of courses. The first group of courses includes specialized accounting courses that represent 63 credit hours. The second group of courses includes courses related to accounting such as economics, business administration, commercial law, business mathematics, finance, insurance and statistics. This group of courses represents 46 credit hours. The third group of courses includes Islamic religious courses such as Islamic Fiqh, Islamic Creed, Holy Qur'aan, Biography of the Prophet, Islamic culture, Islamic Sharia and the Rightly-Guided Caliphs. This group of courses includes 28 credit hours. The last group of courses, which represents 10 h, includes other general courses such as Arabic language and English language.

Although the accounting program at Umm Al-Qura University includes a large number of religious courses, most of these courses are not directly related to ethics, but are related to the Islamic history, the Islamic creed and the Islamic fiqh (i.e. rules of prayer, fasting, zakat, alms, etc.). As for the remaining courses which directly related to ethics, it suffers from three problems. First, these courses are university requirements and, therefore, are taught to all university students regardless of their majors. Accordingly, these courses deal with the general rules of ethics and not the ethics of accounting specifically. Second, these courses are theoretical courses that do not include any practical content, which means that they depend

more on memorization than understanding. Third, these courses are taught by faculty members who are not specialized in accounting or business, but they belong to religious colleges. Accordingly, they do not have any knowledge of accounting and the ethical dilemmas that the accountant faces when practicing the profession. In fact, accounting ethics education is a specialized discipline intended to assist professional accountants in the decision-making process that involves ethical dilemmas. Teaching accounting ethics needs lecturers specialized in accounting. Ethics education requires dealing with ethical dilemmas that may contradict with traditional accounting concepts (Maruszewska, 2011). Accounting ethics education should not be limited only to presenting general principles of ethics, but should include practical training by presenting case studies of fraud and financial deviations, placing the student in various accounting situations that require ethical decisions to be made (Liu *et al.*, 2012). Ethics education in accounting should focus on enabling students to think about the different situations in accounting that deal with ethics and to gain knowledge about how to sharpen their ethical reasoning skills. This can be done by presenting brief presentations of cases of financial scandals, a case study of a financial scandal that highlights the ethical decision-making process in accounting, examining the factors that may lead to accounting fraud to help students identify the types of fraud, and role playing that includes a series of ethical dilemmas in the form of improvisational role-playing are represented by the students, etc. (Okougbo *et al.*, 2021). These methods, of course, require a lecturer specialized in accounting. Consequently, it is expected that the teaching of general religious courses will not have a significant impact on the ethical decisions of accounting students in this program. This leads to the formulation of the main hypothesis of this study, which is as follows:

H0. Teaching general religious courses does not have a significant impact on the ethical decisions of accounting students.

Methodology

Sample

The study population consists of all accounting students enrolled in the accounting program at Umm Al-Qura University in Makkah. The total number of students enrolled in the program during the study period is 1,277 students distributed over the eight study levels of the program. Referring to the study plan of the program, it was found that most religious courses are taught at the early levels of the program (i.e. first, second, third and fourth). As for the religious courses included in the advanced levels (i.e. fifth, sixth, seventh and eighth), it has been noted that these religious courses are separate courses from each other and, accordingly, do not have related prerequisite courses from previous levels, which makes the majority of students enroll in them while they are still in the early levels with the aim of devotion to accounting courses included in these advanced levels. This means that students enrolled in the four higher levels are highly likely to have studied all the required religious courses, while students enrolled in the lower levels are highly likely to have studied only a few of these courses. To achieve more certainty about whether or not to study religious courses, the study focused on students enrolled in the first level and students enrolled in the seventh level (semi-final level). For first-level students, because the research instrument was administered in the fifth week of the first semester of the academic year 2020/2021, this ensures that these students did not complete any of the religious courses because they only spent five weeks at the university. Students enrolled in the seventh level were chosen for two reasons: First, these students are highly likely to have completed all religious courses. Second, the registration system at Umm Al-Qura University requires that registration be

opened in the first semester for the odd levels (i.e. first, third, fifth and seventh), while registration is opened in the second semester for the even levels (i.e. second, fourth, sixth and eighth). Because the study was conducted at the beginning of the first semester, only seventh-level students were available as final level. The research instrument was sent by email to all students enrolled in Level 1 and Level 7 in the program. A total of 346 questionnaires were sent to the participating groups. Out of this number, 278 were returned to the author representing 80.3% response rate. A total of 31 of the questionnaires received were excluded from the final analysis because respondents did not fully answer the questions. The remaining final sample size consisted of 247 students. Demographic profiles of the respondents are shown in Table 1. As shown in Table 1, there is some balance between male and female respondents. There is also a balance, to some extent, between the number of first-level students and the number of seventh-level students. The largest number of respondents was under the age of 21, followed by respondents between the ages of 21 and 25.

Survey description

This study is a cross-sectional survey that aims to collect field data on the impact of teaching religious courses on the ethical perceptions of accounting students at Umm Al-Qura University in Saudi Arabia. To increase the understanding of the participants, the survey was provided with a cover letter providing a brief explanation of the content of the survey, emphasizing that the data will only be used for research purposes and will be used anonymously. The questionnaire includes four main sections. The first section aims to collect demographic data on the participants (i.e. gender, age, study level). The second section aims to examine the students' perceptions of the importance of ethics in general. This section includes five general statements that attempt to explore students' general perception of the importance of ethics for society. Respondents were asked to express their opinion on these five statements on a five-point Likert scale, starting with 1= "totally disagree" and ending with 5 = "totally agree". The third section aims to explore the ethical perception of students in relation to business. This section includes five statements designed to explore students' views on business ethics. Respondents were asked to express their opinion on these five statements on a five-point Likert scale, starting with 1 = "totally disagree" and ending with 5 = "totally agree". The fourth section aims to explore the ethical attitude of students by presenting five scenarios that describe ethically suspicious accounting situations. Students were asked to express their opinion on the decision made by the accountant and whether it is an ethical or unethical decision on a five-point Likert scale starting with 1 = "Ethical"; 2 = "Questionable"; 3 = "Minor infraction"; 4 = "Serious infraction"; and 5 = "Totally unethical". The study intended that these scenarios be simple and not very specialized in accounting, as part of the participants are from the first level in the program and, therefore, they do not have sufficient knowledge of technical issues in

Category	Scale	<i>N</i> = 247 (100%)
Gender	Males	119 (48.2%)
	Females	128 (51.8%)
Age	Under 21	126 (51%)
	21–25	104 (42.1%)
	More than 25	17 (6.9%)
Study level	Level 1	136 (55.1%)
	Level 7	111 (44.9%)

Table 1.
Demographic profiles
of the respondents

accounting. These scenarios were adapted from prior studies (Okougbo *et al.*, 2021; Harun, *et al.*, 2020; Cheung, 2019; Nadaraja and Mustapha, 2017; Mohamed Saat *et al.*, 2010; Cagle and Baucus, 2006; Elias, 2006). The first scenario describes a situation in which a newly graduated accountant works in small company with its sales made mostly in cash to small clients. The owner of the company asked the accountant to transfer part of the cash collected from these sales to his/her personal account instead of recording it in the company's revenues to reduce tax payments. For fear of losing his/her job, the accountant did what the owner requested. The second scenario describes a situation in which a newly graduated accountant works for a small business with a product that has an original selling price of 100 SR and sales are slow. The owner asked the accountant to put a banner on the product stating that there was an offer that included a reduction in the selling price of this product from 130 SR to 100 SR. The owner mentioned to the accountant that this procedure is just to stimulate sales and will not harm anyone as the product will be sold at its original price in the end. For fear of losing his/her job, the accountant did what the owner requested. The third scenario describes a situation in which a company sent the accountant to do a temporary assignment in another city and he/she is compensated in cash for travel costs upon his return. Because of the accountant's feeling that he/she made a great effort in this task, he/she agreed with the hotel employee in this city to give him/her accommodation bills for an amount greater than the real amount so that he/she could obtain from the company a larger amount as compensation for the effort he/she made. The accountant justified this action on the grounds that the compensation he/she would get from the company would not be commensurate with the effort he/she made. The fourth scenario describes a situation in which a newly graduated accountant works for a small company. In the last month of the fiscal year, the owner asked him/her to postpone the recording of some expense bills in that month and to record them at the beginning of the new month to show the company's profits greater than they are to facilitate obtaining a loan from the bank. The owner mentioned to the accountant that this procedure is not manipulative, as long as these bills will eventually be recorded. For fear of losing his/her job, the accountant did what the owner requested. The fifth scenario describes a situation in which a newly graduated accountant works in a small company. This accountant suspected that the financial manager is exploiting a loophole in the internal control to manipulate revenues by transferring part of the cash proceeds from sales to his/her own account. For fear of losing his/her job, the accountant decided to remain silent and not inform the owner of the company, because this manager has been working for a long time in the company and has credibility with the owner. The data collected from the questionnaires was analyzed using SPSS 17 software. The questionnaires were administered and collected during October 2020 and they were developed in the Arabic language.

Analysis and results

Students' general perception of ethics

The second section of the questionnaire included five questions aimed at exploring students' general perception of the importance of ethics. Table 2 presents the students' answers to these questions. Considering that 2.5 is the average mean of responses, it is noted that the responses of both first-level students and seventh-level students are all higher than the average. This is indicative of the perception of students at both levels of the importance of ethics in general. By looking at the means of students' responses to the five questions, as shown in Table 2, it is noted that seventh-level students show a higher perception of the importance of ethics in general compared to first-level students. This indicates that the teaching of religious courses has led to an improvement in the ethical perception of students.

SBR

Statement	Mean	Std.	<i>t</i>	Sig (two-tailed)
<i>Ethics is important to guide the behaviors of all society's members</i>				
Level 1	3.869	0.968	-1.632	0.081
Level 7	4.023	1.056		
<i>Before taking any action, anyone must verify that the action is ethically correct</i>				
Level 1	3.586	1.103	-3.169	0.062
Level 7	3.745	0.896		
<i>Before taking any action, anyone must verify that such action will not harm others</i>				
Level 1	3.658	1.231	-2.248	0.089
Level 7	3.824	1.154		
<i>Anyone must maintain ethics in his/her actions, regardless of what others do</i>				
Level 1	3.521	0.968	-1.478	0.096
Level 7	3.698	1.637		
<i>Anyone should not take any unethical action to please another person</i>				
Level 1	2.891	1.693	-4.235	0.071
Level 7	3.215	0.831		

Table 2.
Students' general
perception of ethics

Note: $p \leq 0.05$

However, by looking at the results of the independent *t*-test to test the significance of the differences between the means of the students' responses, it appears that this improvement is not statistically significant at statistical significance level $p \leq 0.05$. These results lead to acceptance of the null hypothesis that teaching religious courses has no significant effect on students' ethical perception.

Students' perception of business ethics

The third section aims to explore the ethical perception of students in relation to business. This section includes five statements designed to explore students' views on business ethics. Table 3 presents the students' answers to these questions. Considering that 2.5 is the average mean of responses, it is noted that the responses of both first-level students and seventh-level students attained higher than average. This is an indication that students at both levels perceive the importance of business ethics. However, as shown in Table 3, the seventh-level students showed higher perception of the importance of business ethics in relation to improving the company's image in society (i.e. Statement 2). On the contrary, the seventh-level students showed less perception than the first-level students regarding the importance of business ethics for the company's survival in the market and the need to maintain business ethics when performing business even if this led to the failure to achieve high profits (i.e. Statements 1, 3, 4 and 5). This can be attributed to the fact that the accounting courses that students study are still based on the neoclassical economic theory, which states that increasing profit (i.e. shareholder wealth) is the main objective of the company and the most important factor is its survival in the market. Although the results of the independent *t*-test show that the differences between the means of students' responses to the five statements are not significant at a statistical significance level of 0.05, the comparison of the means of the students' responses to the five statements shows the inability of religious courses to change students' attitudes regarding business ethics as a main goal for the company along with the goal of increasing profit. These results again lead to acceptance of the null hypothesis that teaching religious courses has no significant effect on accounting students' perceptions of ethics.

Statement	Mean	Std.	<i>t</i>	Sig (two-tailed)
<i>Commitment to ethics in conducting business is important to the company's survival in the market</i>				
Level 1	3.189	1.832	2.478	0.091
Level 7	2.732	1.063		
<i>Commitment to ethics in conducting business improves the company's image in society</i>				
Level 1	2.964	0.687	-5.257	0.101
Level 7	3.124	1.681		
<i>The company must maintain ethics in conducting business, even if this does not lead to high profits</i>				
Level 1	2.861	0.968	2.275	0.083
Level 7	2.512	0.867		
<i>The company must maintain compliance with laws and regulations in conducting business, even if this does not lead to high profits</i>				
Level 1	4.291	1.123	1.957	0.089
Level 7	3.957	1.631		
<i>The company must assume its social responsibility when conducting business, even if this does not lead to high profits</i>				
Level 1	3.882	0.456	3.820	0.098
Level 7	3.419	0.851		

Note: $p \leq 0.05$

Table 3.
Students' perception
of business ethics

Students' ethical decisions

The fourth section of the instrument aimed to explore students' attitudes regarding ethics in decision-making. Students are presented with five scenarios involving decisions that contain ethical dilemmas and asked to give their opinion on the ethics of these decisions. Table 4 presents the students' responses to these scenarios. Considering that 2.5 represents the average mean, it is noticed that both the first- and seventh-level students scored more than the average, which indicates that the students of both levels perceive that these decisions were unethical. As shown in Table 4, the mean responses for the five scenarios were higher

Scenario	Mean	Std.	<i>t</i>	Sig (two-tailed)
<i>Scenario 1</i>				
Level 1	2.689	1.026	-2.325	0.098
Level 7	2.751	0.698		
<i>Scenario 2</i>				
Level 1	2.923	1.631	-2.369	0.085
Level 7	3.045	1.934		
<i>Scenario 3</i>				
Level 1	2.761	0.863	-3.863	0.079
Level 7	2.897	1.245		
<i>Scenario 4</i>				
Level 1	3.124	1.314	-1.642	0.075
Level 7	3.341	1.402		
<i>Scenario 5</i>				
Level 1	2.841	1.814	-2.134	0.069
Level 7	2.987	0.688		

Note: $p \leq 0.05$

Table 4.
Students' ethical
decisions

for the seventh-level students compared to the first-level students. This indicates that the perception of the students of the seventh level of the ethics of these decisions was higher than that of the students of the first level, which means that the teaching of religious courses had a positive effect on the students' perception of the ethics in making decisions. However, the results of the independent *t*-test show that the differences between the means of students' responses to the five scenarios are not significant at a statistical significance level of 0.05. These results again lead to acceptance of the null hypothesis that teaching religious courses has no significant effect on accounting students' perceptions of ethics.

Gender effect

Gender is a frequently investigated attribute in studies examining the ethical decisions of accounting students. The importance of examining this attribute increases with the increase in the role of women in economic activities in Saudi Arabia, which has adopted a comprehensive vision called Saudi Vision 2030. One of the main components of this vision is the empowerment of women in society in general and the affirmation of their right to assume management positions, just like men. The general view is that females are more moral and more ethical than males (Sadler and Barac, 2005), but research on gender differences to evaluate ethical perceptions and judgments has frequently produced mixed results. Therefore, the current study tested the effect of gender on students' ethical decisions. Table 5 presents the differences between the mean responses of male and female students to the five scenarios for each of the first and seventh levels. As it can be seen from Table 5, the mean responses of female students at either the first level or the seventh level were higher than the mean responses of male students in all scenarios. This indicates that female students perceive ethics higher than male students. This result is consistent with the results of several studies that have provided evidence that males tend to behave less ethically than females (Okougbo *et al.*, 2021; Harun *et al.*, 2020; Costa *et al.*, 2016; Onyebuchi, 2011; Jooste, 2010; Sadler and Barac, 2005; O'Leary and Radich, 2001). Although this study was not specifically designed to test the view that females may behave more ethically than males,

Scenario	Mean		t	Sig (two-tailed)
	Male	Female		
<i>Scenario 1</i>				
Level 1	2.039	3.126	1.968	0.003*
Level 7	1.967	2.264	2.124	0.000*
<i>Scenario 2</i>				
Level 1	2.120	2.912	2.134	0.000*
Level 7	2.368	3.245	2.001	0.000*
<i>Scenario 3</i>				
Level 1	1.978	2.161	3.314	0.000*
Level 7	1.425	2.217	2.624	0.000*
<i>Scenario 4</i>				
Level 1	2.687	3.521	1.947	0.000*
Level 7	2.318	3.402	1.863	0.000*
<i>Scenario 5</i>				
Level 1	2.102	2.963	2.316	0.001*
Level 7	1.986	2.748	1.968	0.000*

Table 5. Comparison between the ethical decisions of the two genders

Note: * $p \leq 0.05$

the results of this study support the idea that ethical behavior may differ depending on gender. The result of this study indicates that males and females may respond differently to the same set of ethical dilemmas.

Perception of ethics, business ethics and ethical decisions

Students' general perception of ethics and students' perception of business ethics were presented in [Tables 2](#) and [3](#), respectively. To examine the effect of students' general perception of ethics and students' perception of business ethics on ethical decision-making, students' responses to each of the five scenarios were divided into quartiles. The top quartile includes the highest ethical perception of the scenario, while the bottom quartile includes the lowest ethical perception of the scenario. Also, students' responses to general ethics and business ethics were divided into quartiles. The top quartile includes the highest perception of each of general ethics and business ethics, while the bottom quartile includes lowest perception of each of general ethics and business ethics. In an attempt to determine the effect of students' general perception of ethics and students' perception of business ethics on ethical decisions of the students, five multiple regression models were run (one for each of the five scenarios). Ethical perception of the scenario was specified as the dependent variable in each model. This dependent variable was measured through a dummy variable that takes the value 1 if the student falls into the top quartile and the value is zero if the student falls into the bottom quartile. The independent variables in each model include four variables. The first independent variable is the students' general perception of ethics, which was measured through a dummy variable that takes the value 1 if the student falls into the top quartile and the value is zero if the student falls into the bottom quartile. The second independent variable is the students' perception of business ethics, which was measured by a dummy variable that takes the value 1 if the student falls into the top quartile and the value is zero if the student falls into the bottom quartile. The third independent variable is the student's study level, which was measured through a dummy variable that takes the value 1 if the student is in the seventh level and the value zero if the student is in the first level. The fourth independent variable is gender, which was measured through a dummy variable that takes the value 1 if the student is male and the value zero if the student is female. As presented in [Table 6](#), it is noted that gender is significant in all scenarios, which confirms the results presented in [Table 5](#), that indicate the significance of gender in influencing students' ethical perceptions. It is also noted from [Table 6](#) that the students' general perception of ethics is significant in all scenarios, which confirms the important impact of students' general perception of ethics on their ethical decisions. With regard to the perception of business ethics, it was significant only in the first and fourth scenarios, and it was not significant in the rest of the scenarios. This result indicates the weak influence of the perception of business ethics on students' ethical decisions. The results shown in [Table 6](#) mean that there is a deficiency in teaching accounting ethics at Umm Al-Qura University. The general religious courses taught focus on the general concepts of ethics and not ethics in the accounting profession specifically. Also, these courses are taught by specialists in the Islamic religion and not in accounting. Therefore, they do not have the ability to link ethics to business practice and to make specialized decisions in accounting. This interpretation could be confirmed by looking at [Table 6](#), where it is noted that the study level of the students did not have a significant effect in all five scenarios. Again, this result clearly indicates that there is no significant effect of teaching general religious courses on improving students' ethical decisions, which again leads to accepting the study hypothesis in that teaching general religious courses has no significant effect on students' ethical decisions.

In general, the findings of the study revealed that although the ethical perception of students who studied religious courses was higher than that of students who did not study

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Scenario	Coefficient	<i>t</i> -statistic	Sig.	
<i>Scenario 1</i>				
General ethics	0.075	0.984	0.003*	Adjusted $R^2 = 0.181$ $F = 17.742$ Significant F less than 0.05
Business ethics	1.131	2.967	0.001*	
Study level	0.124	3.551	0.761	
Gender	0.199	3.448	0.000*	
<i>Scenario 2</i>				
General ethics	0.104	0.634	0.000*	Adjusted $R^2 = 0.192$ $F = 19.231$ Significant F less than 0.05
Business ethics	0.246	3.258	0.081	
Study level	0.501	3.621	0.801	
Gender	1.328	5.189	0.000*	
<i>Scenario 3</i>				
General ethics	0.081	0.965	0.000*	Adjusted $R^2 = 0.209$ $F = 16.874$ Significant F less than 0.05
Business ethics	0.987	2.841	0.071	
Study level	0.410	3.684	0.701	
Gender	2.341	4.125	0.002*	
<i>Scenario 4</i>				
General ethics	0.130	0.564	0.000*	Adjusted $R^2 = 0.169$ $F = 21.178$ Significant F less than 0.05
Business ethics	0.967	2.852	0.030*	
Study level	0.598	3.263	0.697	
Gender	1.398	3.374	0.000*	
<i>Scenario 5</i>				
General ethics	0.091	1.239	0.002*	Adjusted $R^2 = 0.197$ $F = 19.879$ Significant F less than 0.05
Business ethics	0.718	2.036	0.714	
Study level	1.327	4.966	0.903	
Gender	2.291	3.624	0.000*	

Table 6.
Regression models:
ethical decisions

Note: *Significant at $p \leq 0.05$

these courses, the independent sample *t*-test and regression analysis results revealed that this improvement was not significant. This indicates that teaching these religious courses does not have a significant impact on the ethical decisions of undergraduate accounting students. In fact, the results of the current study are in consistence with the results of a number of previous studies in other countries, which concluded that teaching ethics did not have a significant impact on the ethical decisions of accounting students (Arfaoui *et al.*, 2016; Buell, 2009; Gammie and Gammie, 2009; Rogers and Smith, 2008). Also, the findings of this study confirm the findings of Sulaiman *et al.* (2021) and Montenegro and Rodrigues (2020), which revealed that, while religious values are important, there are other factors that are also pertinent when making decisions at work, namely, the organization's interest and the context of the decision. The results of this study are also consistent with the results of Ebaid (2021), which revealed that most of final year accounting students in Saudi universities, including Umm Al-Qura University, have indulged to varying degrees in academic dishonesty, as one of the unethical behaviors, which is considered an indication of the weak effect of teaching religious courses on students' perception of ethical behaviors.

Conclusion, limitations and suggestions

Accountants are responsible for preparing the financial reports that several stakeholders rely on in making their economic decisions. Any unethical behavior of the accountant will result in harming these stakeholders. After the recent financial scandals, which included

unethical behavior of accountants, the research directed toward studying the importance of integrating ethics courses into accounting curricula, as well as studying the impact of this integration on the ethical perception of students. However, the studies that have been done regarding the effect of teaching ethics in accounting education on the ethical perceptions and decisions of students have been mostly conducted in developed countries, and these studies have come to conflicting results. This study contributes to this research stream by examining the effect of teaching religious courses in accounting curricula in Saudi Arabia, as one of developing countries, on the ethical decisions of accounting students. After surveying a sample of accounting students, the study found that teaching religious courses has led to an improvement in the ethical decisions of students, but this improvement was not significant. This study points to the shortcomings of the current teaching model used at Umm Al-Qura University, which depends on teaching general religious courses instead of teaching specialized courses in accounting ethics. The results of this study can provide an indication for those responsible for managing the accounting program at Umm Al-Qura University to start developing the program so that some general religious courses are replaced by specialized courses in accounting ethics that focus directly on the ethical dilemmas faced by the accountant when practicing the accounting profession and are taught by specialists in Accounting. However, this study is not without limitations. One of these limitations is that, like all studies that have examined students' ethical decisions through questionnaires, whether or not participants in this study will actually act as they say when filling out an anonymous questionnaire. Although respondents were asked to imagine themselves in a particular situation, there were no real pressures, benefits or consequences attached to that situation. Another limitation is that this study focused only on one university in Saudi Arabia. Future studies can investigate this issue by using larger samples from a larger number of Saudi universities, which increases the ability to generalize the results. Also, the current study focused on the effect of teaching religious courses on the ethical decisions of accounting students without examining the extent to which this effect differs according to other intervening variables [e.g. personal moral philosophies (relativism vs idealism), age, work experience, religiosity, etc.]. Future studies could examine whether these factors have an effect on the relationship between teaching religious courses and the ethical perception of accounting students.

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