

# Insights from forensic accounting educators and practitioners within the KSA context regarding the optimal forensic accounting skills set: an implication on the socioeconomic development

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## Abstract

**Purpose** – The purpose of this study is to evaluate the current state of forensic accounting education in the Kingdom of Saudi Arabia (KSA), as well as to identify the desired aims and skills required to practice forensic accounting as a profession. It also seeks to understand the education and skills provided by KSA forensic accounting education programs, the job skills required by professional accountants and the skills required by professional accountants' employers.

**Design/methodology/approach** – The study is exploratory in nature. A convenience base sampling approach was used to select the academicians and practitioners working in KSA. Participants were requested to fill out an electronic questionnaire and rank each statement on a 5-point Likert score. The responses were converted and analyzed using the *T*-test, to evaluate the inter- and intra-group trends in the data.

**Findings** – The study included 58 responses from practitioners and 30 from academicians. Both groups mentioned that the classroom and the Internet were their primary source of forensic accounting information, especially in professional accounting qualifications. According to the participants, most of the institutions in KSA do not offer forensic accounting courses. Nonetheless, forensic accounting is critical for strengthening the credibility of financial reporting in courtrooms. The study finds subtle inter-group differences regarding the development of an ideal curriculum for forensic accounting, which translates to a bigger difference in curriculum development and practice skills. Both groups were optimistic about the future path of forensic accounting in KSA.

**Originality/value** – The study reports critical differences between the status of forensic accounting education and the skills required to practice forensic accountancy in KSA.

**Keywords** Forensic accounting, Expert witness, Fraud, KSA

**Paper type** Research paper

## 1. Introduction

Several high-profile cases of financial reporting fraud have occurred in recent years. In the 1980s, mergers and acquisitions led to substantial growth in these cases (Seda and Kramer, 2008; Senan and Swalih, 2019). Fraudulent actions trigger financial catastrophes with far-reaching economic consequences, such as the collapse of financial institutions and other large corporations. Several problems in Saudi Arabia's (KSA) forensic accounting curriculum must be addressed (Ebaid, 2022; Senan and Swalih, 2019). In particular, instead of a short training



course, the accounting curriculum for undergraduate and postgraduate study needs to be revised (Albader, 2015).

The kingdom of Saudi Arabia (KSA) has experienced an increase in the demand for forensic accounting and related skills (Alabdullah *et al.*, 2013; Carpenter *et al.*, 2011; Senan and Swalih, 2019). Because of the lack of auditing and qualified forensic auditors, the Middle Eastern countries are expected to suffer from fraud and economic crimes in the future (Hidayat and Al-Sadiq, 2014; Mate *et al.*, 2017).

Accounting, auditing and forensic accounting courses in higher education institutions in Saudi Arabia are clearly needed to prepare accounting professionals for monitoring and preventing fraudulent activities in companies across the country. The University of Florida offers forensic accounting courses at various campuses; however, each campus seems to offer a unique course of study with no reference to any “model” program (Seda and Kramer, 2008). As a result, there is a significant misalignment between the forensic accounting skills provided by these schools and the actual demands of KSA’s practicing forensic accountants. This study intends to analyze the current state of forensic accounting education, practice and prospective employment opportunities. The study further intends to understand the differences between the education and skills provided by institutions and the practical skills required for working as professional accountants.

## 2. Literature review

As a result of large-scale frauds reported in the early 21st century, the field of forensic accounting has been around for more than half a century and has attracted the interest of both the private and public sectors (Alabdullah *et al.*, 2013; Carpenter *et al.*, 2011; Senan and Swalih, 2019). Forensic accounting can be defined as using or applying accounting techniques in courtrooms. It refers to “the application of specialized knowledge and investigative skills possessed by CPAs to collect, analyze and evaluate evidential matter and to interpret and communicate findings in the courtroom, boardroom or other legal or administrative venues”.

The definition of forensic accounting varies between authors; nonetheless, they all share the same core idea, which is accounting practices and techniques designed for use in court (Alhusban *et al.*, 2020; Hamid, 2016).

There are three categories of forensic accounting: expert witnesses, litigation support consulting and fraud investigation. These three categories of forensic accounting are interrelated, although their application in the KSA differs.

### 2.1 Expert witnesses forensic accounting

In courts, accounting professionals can translate financial data, which is insufficient, especially when the case is complicated (Al-Twajiry *et al.*, 2003; Suleiman and Othman, 2021). Thus, forensic accountants are the sole expert witnesses who, based on their professional expertise, can interpret otherwise complex financial information (Gottschalk, 2019; Singleton and Singleton, 2010).

As an expert witness, the forensic accountant requires skills that are distinct from those required for day-to-day accounting work (Whitehouse, 2022). For instance, courtroom etiquette might be challenging for accountants who are accustomed to regulating the flow of information in the workplace (Cali, 2013; Daniels and Gupta, 2013; Mitric *et al.*, 2012). A brief presentation of well-prepared materials might not be sufficient in a courtroom. Having an expert witness is also important for simplifying complex financial terms for people with no financial background (Kranacher and Riley, 2019). Nonetheless, accounting education does not adequately train accountants for judicial procedures.

### *2.2 Litigation support forensic accounting*

Forensic accountants are required to provide litigation support when critical financial data analysis is needed for any legal activity (Kranacher and Riley, 2019). This type of support includes investigating and measuring financial information that will be used in a courtroom case. Examples include damage estimates, divorce settlements and other accounting principles requiring interpretations. A comptroller is a management-level position in charge of overseeing the quality of an organization's accounting and financial reporting. He/she does not always appear in the courtroom to provide litigation support. However, if forensic accountants are called upon to demonstrate their expertise in financial matters in court, they will attend as expert witnesses, as previously described (Ramadhan, 2015).

### *2.3 Fraud investigation forensic accounting*

This branch of forensic accounting has evolved quickly, especially since the 1990s (Modugu and Anyaduba, 2013). The goal of forensic accounting in the KSA is to supply courts with qualified accountants who can provide specialized services in financial events based on their accounting knowledge. The role of these accountants is to represent clients in courts and specialized judicial committees, especially those dealing with customs, insurance, zakat, taxation and other processes and financial cases (Dada *et al.*, 2013).

Accounting education has typically been insufficient to qualify people as forensic accountants. Furthermore, the vast majority of the knowledge was acquired by accident or as a result of learning from the process (Mitrić *et al.*, 2012). The accountants' experience in fraud does not inherently qualify them to work as forensic accountants or fraud investigators (Modugu and Anyaduba, 2013). In most areas, the need for forensic accountants with the necessary experience in investigating fraud outweighs the available supply (Okoye, 2010). Accountants require an additional set of skills and training to adequately investigate fraud cases. Neither businesses nor accounting scholars have received adequate forensic accounting training. Most graduates are unable to detect fraud if it is directed specifically at them. The comptroller has yet to detect fraud, opportunity or even financial dishonesty (Dada *et al.*, 2013). Forensic accounting courses have lately begun to be developed and implemented by educational foundations. Therefore, the current expansion of forensic accounting training is crucial for the subject's growth; additional expansion is required to meet global demand (Singleton and Singleton, 2010).

This study aims to determine (1) industry and academic experts' perceptions of the highest priority forensic accounting education and training content for practicing CPAs in KSA, (2) the role of forensic accounting services professionals in KSA and (3) typical career path and future demand for forensic accountants in KSA. In this regard, a convenience-based survey was undertaken, with accounting professionals, as well as academicians. The participants were asked to respond to various questions on a 5-point Likert scale and the data were analyzed using the *T*-test. The study highlights the status of forensic accounting education in KSA, as well as the demand for forensic accountants and the required skills.

## **3. Methodology**

### *3.1 Study participants and survey*

The survey was conducted electronically and the questionnaires were administered to accounting professionals and members at selected universities. About 600 survey copies were distributed to accounting professionals (CPAs) through personal contacts and 400 copies were administered to the faculty members. To achieve the highest response rate possible, a mixed response sampling technique was used. Personal contacts and social media networks were used to reach the participants, who were also encouraged to share the

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questionnaire with their friends and social media followers. Finally, the snowball sampling technique was used to target those who were difficult to identify.

### 3.2 Survey questionnaire and measures

Based on a thorough literature review, a questionnaire was developed for this study. After multiple consultations with subject matter experts, a final version of the questionnaire was administered to the study's participants. Academicians from American, Middle Eastern and Saudi Arabian universities, information collected from reviewing forensic accounting analytical studies (Crumbley *et al.*, 2007; Digabriele, 2008; Pearson and Singleton, 2008), along with the forensic accounting curriculum model published by West Virginia University and the US Department of Justice in 2007 (Alshurafat, 2019) were among the contributors to the development of the questionnaire.

The questionnaire used in this study is divided into eight sections. The first section (Questions 1–7) gathers general background information from the participants. The respondents were asked about their gender, education level, professional certifications and years of experience in forensic accounting (FA). The second, third and fourth sections (Questions 8–16) ask participants about FA in terms of their knowledge and familiarity with forensic accounting, the perceived importance of forensic accounting education in KSA, the importance of some topics in forensic accounting and the future career path and demand for forensic accountants in KSA. Academicians were asked some additional questions listed in Table S1. Cronbach's alpha was used to determine the internal consistency of the components.

### 3.3 Data cleaning

As previously stated, the survey was conducted using different electronic sources. As a result, to ensure quality control, the data was thoroughly analyzed. There were no issues with the quality among the practitioners ( $n = 58$ ). However, duplicate IP addresses were recorded for 60% of the academicians' group, and in some cases, the overall time taken to complete the survey was relatively short. Therefore, observations with duplicate IP addresses and survey responses with a below-average response time (less than a six-minute time response given that the average time to answer all survey questions, whether the respondent chose Arabic or English language, is about six to eight minutes) were eliminated. Thus 25 responses from academicians were electronically recorded, and five more responses were included using the snowball technique. After cleaning and adding new responses, the academics' responses totaled 30. Thus, the analysis comprised 58 responses from practitioners and 30 from academicians.

### 3.4 Data analysis

The data collected were analyzed using the Statistical Package for Social Scientists (SPSS, version 18). Cronbach's alpha was calculated for each of the study variables used to measure a unidimensional construct with multiple items. Therefore, Cronbach's alpha tests were conducted on the questionnaire's Likert-type scale questions. Before conducting descriptive statistics, the taxonomy level of measurement was determined for each variable. Gender was treated as a nominal variable, while years of experience working in the forensic accounting field and level of education were treated as categorical variables. Each variable was calculated separately for practitioners and academics, as well as for the unified group of respondents.

The responses on the following variables were assigned to determine the variables: knowledge and familiarity with forensic accounting, perceptions of the eight aspects of forensic accounting education, perceived importance of forensic accounting courses, the role of forensic accounting education in KSA and the future career paths and demand for forensic accountants in KSA. A *T*-test comparison was used to determine the differences between the groups (practitioners versus academics).

## 4. Results and discussion

### 4.1 Questionnaire validation (content and reliability analysis)

Cronbach's alpha was calculated for all the study variables intended to measure a multidimensional construct. A Cronbach's alpha value closer to 1 demonstrates high internal reliability (Sekaran and Bougie, 2016). However, the psychometric literature generally agrees that the scale is reliable when Cronbach's alpha is at or above 0.7 or 0.8 (Field, 2013). Herein, Cronbach's alpha is calculated for the questionnaire's Likert-type scale items (Table 1). As shown in this table, all the components display good internal consistency, with Cronbach's alpha values ranging from 0.666 to 0.910.

### 4.2 Characteristics of respondents' demographics

Table 2 tabulates the demographic details of the respondents, based on the responses of 58 practitioners ( $n = 58$ ) and 30 academics ( $n = 30$ ). 80.7% of the participants are male, while 19.3% are female. Males outnumber females in each of the two categories. While most academic respondents hold a master's degree, the situation is different for practitioners, who are predominantly bachelor's degree holders. The academicians' higher education might be attributed to King Abdullah's scholarship-an excellent opportunity for Saudis to pursue higher education (Alshurafat *et al.*, 2020; Taylor and Albasri, 2014). Both groups of respondents have 5 years of teaching experience, on average.

According to Table 2, the vast majority of respondents (61.4%) have bachelor's degrees, with 28.4% having master's degrees. 28.4% have more than 10 years of practical experience. For practitioners, 78% (77.97%) have a SOCPA certification, which is the equivalent of a CPA, and 11% have both SOCPA and CPA qualifications, along with other certifications (CMA, CFE, etc.). The dominant workplace for forensic accountants is the internal departmental investigation unit in the private sector (41.37%), followed by the internal departmental investigation unit in government (20%) and private forensic investigation (17.24%). Interestingly, only 26.2% of the practitioners have worked or are still working in forensic accounting, while 73.8% have never worked in forensic accounting, indicating that forensic accounting is a new field in KSA.

### 4.3 Knowledge and familiarity with forensic accounting—practitioners

The respondents were asked about their awareness of forensic accounting (Table 3). Given that all the practitioner respondents have professional skills and five or more years of work experience, they all stated their familiarity with forensic accounting. The respondents were then questioned about their knowledge of forensic accounting (Table 3). Although all practitioners indicated their awareness of forensic accounting, they stated their unfamiliarity with its nuances and intricacies.

The primary sources of awareness, especially regarding professional accounting qualifications, are classroom education and access to the Internet, followed by colleagues/friends and the media. Conversely, workshops, textbooks/journals and conferences have the smallest contributions to spreading awareness. According to one respondent, through work

**Table 1.**  
Internal consistency  
reliability and  
Cronbach's alpha

Components	Number of items	Cronbach's alpha
Perceived benefits of FA	8	0.875
Covering topics in a FA course	25	0.910
Role of FA education in KSA	7	0.844
Future career path for forensic accountants in KSA	5	0.666

	Practitioners 58 (66%)	Respondents Academics 70 (34%)	Both 128 (100%)
<i>Gender</i>			
Male	47 (81%)	56 (80%)	103 (80.7%)
Female	11 (18%)	14 (20%)	25 (19.3%)
<i>Years of experience working in the FA field</i>			
Less than 5 years	23 (39%)	14 (20%)	37 (33.0%)
Between 5 and 10 years	10 (17%)	35 (50%)	45 (28.4%)
Between 10 and 15 years	9 (15%)	11 (9.1%)	15 (19.3%)
More than 15 years	16 (27%)	1 (1.1%)	17 (21.3%)
<i>Highest level of education</i>			
Bachelor's degree	42 (72%)	28 (40%)	70 (61.4%)
Master's degree	13 (22%)	28 (40%)	25 (28.4%)
Ph.D. degree	1 (1.72%)	3 (3.3%)	3 (2.3%)
Other	2 (3.45%)	11 (16.7%)	8 (8.0%)

Panel A: practitioners

<i>Professional certifications</i>		
CPA	7	11.86
CMA	6	10.17
CFE	0	0.00
SOCPA	46	77.97
SOCPA and CPA and other	18	11
Total is n/a*	58	100%
Yes	15	25.86
No	43	74.14
Total	58	100%
<i>Employment area</i>		
Private forensic investigative practice	10	17.24
Saudi's police service	3	5.17
Specialized government investigative agency	2	3.44
Academia	7	12
Internal departmental investigation unit in government	12	20
Internal departmental investigation unit in the private sector	24	41.37
Total	58	100%

Have you ever worked or still working in FA? (Note(s): academic question states "outside of academia")

Yes: 33 (26.2%)

No: 93 (73.8%)

**Note(s):** \*A total is not applicable since many respondents hold multiple certifications. Worked or still working in the area of FA service

**Table 2.**  
Common questions  
from both surveys'  
descriptive statistics–  
demographics

experience and practice, he became aware of forensic accounting. "My role is an investigator for that job", he declared.

#### 4.4 State of forensic accounting education in KSA

To investigate the state of forensic accounting education in KSA, the participants were asked to answer multiple-choice questions about forensic accounting education. Most of the institutions in KSA, according to the participants, do not offer forensic accounting courses. Participants agreed that both academics and practitioners should take forensic accounting courses at the undergraduate and graduate levels. Regarding the course subject, the

**Table 3.**  
Knowledge and  
familiarity with FA-  
practitioners

	Answer	%	Count
Are you familiar with FA?			
1	Yes	62.07%	36
2	No	37.93%	22
	Total	100%	58
How did you first hear about FA?			
1	Internet	20.34	12
2	Colleagues/friends	20.34	12
3	Classroom	28.81	17
4	Media	11.86	7
5	Workshops	10.63	6
6	Textbook/journals	8.02	4
7	Conferences	0	0
	Total	100%	58

**Note(s):** \*Percentages are based on the number of respondents

participants recommended “auditing” as the prerequisite, while academics suggested “current issues in accounting” as the prerequisite for forensic accounting education.

Regarding the question “How does your department integrate forensic accounting education into the accounting curriculum?”, most of the academicians responded that their school does not currently offer nor teach forensic accounting. However, according to 33% of academicians, forensic accounting should be covered in both standalone courses and auditing courses. Most academicians (56%) recommended offering and teaching forensic accounting at both the undergraduate and graduate levels. Our findings are consistent with earlier studies that highlighted that many colleges and universities in KSA do not provide a specialized course for fraud examination in the accounting curriculum (Alshurafat, 2019; Hylton Meyer and Kamath, 2010). Interestingly, before Enron, Anderson and other financial scandals, there was little evidence of integrating forensic accounting into formal accounting curricula (Rezaee et al., 2004; Rezaee and Burton, 1997), suggesting that these incidents altered the general perception of forensic accounting, making its integration inevitable. As a result of the aforementioned events, academicians were able to assess the presence of consistency between their work and practitioners’ requirements for a well-qualified forensic accountant. There is widespread agreement that the integration between forensic accounting and formal accounting curricula is compulsory. Forensic accounting education could also be integrated into existing accounting and auditing courses. The rationale for this approach is that the three fields of forensic accounting (litigation consulting, expert witnesses and fraud examination) significantly affect contemporary business. Therefore, forensic accounting topics can be incorporated into existing upper-level accounting and auditing courses. This process assures the coverage of all critical aspects of forensic accounting without the need to add a new course to already saturated accounting curricula. However, our study highlights that the existing curriculum is disjointed and fails to combine a thorough understanding of all facets of forensic accounting. This study also outlines the integration of forensic accounting education into the accounting curriculum. Forensic accounting should be incorporated through accounting and auditing courses, as well as via the introduction of a standalone forensic accounting course.

Participants were next asked, “Who should teach forensic accounting courses?” More than 73% of the respondents (73.3%) answered that forensic accounting courses should be taught by both academics and practitioners. Participants’ responses to the prerequisite courses were diverse, with no clear consensus. One-third of the participants indicated that “current issues in accounting” and “auditing” courses should be the prerequisites, while 23% mentioned that “advanced accounting” should be the prerequisite introductory course for forensic accounting.

*4.5 Perceived benefits of forensic accounting*

To evaluate the perceived benefits of forensic accounting education, the respondents were asked to answer the question “In your professional judgment, what is the relative importance of each of the following eight aspects of education in forensic accounting?” on a 5-point Likert scale (Table 4). The rating scale ranged from 1 (not at all important) to 5 (extremely important). Both academicians and practitioners stated that forensic accounting education will strengthen the credibility of financial reporting.

Forensic accounting is regarded as indispensable by both groups of participants for a variety of reasons, including fostering responsible corporate governance, meeting the demand for forensic accountants and providing litigation support consultations and expert witness (p-value <0.05).

For both academics and practitioners, the three most important aspects of forensic accounting education are (1) strengthening the credibility of financial reporting, (2) promoting responsible corporate governance and (3) preparing students to engage in fraud examination. A T-test showed a nonsignificant difference in the response of both groups of participants, indicating a consensus among both cohorts. While academic respondents believed that corporate governance is the most important benefit of forensic accounting, practitioners were concerned about strong credibility. Nonetheless, both of these aspects are crucial; while the accuracy of the financial report is critical (Chen et al., 2011), responsible corporate governance enhances vigilance and prevents fraud (Thejls Ziegler, 2022). The recent financial mishaps and the questionable financial statements have compelled the business community to adhere to financial and accounting standards, making forensic accounting the only viable alternative for rebuilding investors’ confidence (Ikbal et al., 2020). This reinforces our conclusion that forensic accounting is essential to strengthening the credibility of financial reporting, with the promotion of responsible corporate governance being the most significant aspect of forensic accounting. By participating in external audits, forensic accountants not only boost transparency but also provide members with assurances about internal audit results, improving corporate governance and lowering the likelihood of business failure (Eyisi and Ezuwore, 2014). Therefore, accounting students need to understand how to analyze a responsible corporate governance framework to detect and prevent workplace fraud.

*4.6 Covering topics in a forensic accounting course: legislation, regulation and governance*

Both groups of respondents were asked to rate the importance of covering topics (such as forensic accounting, fraud investigation, legislation, regulation and governance) in a forensic

Items	Academic respondents N = 70		Practitioner respondents N = 58		T	P
	Mean	SD	Mean	SD		
Strengthen the credibility of financial reporting	3.83	1.12	4.03	0.97	-0.87	0.385
Promote responsible corporate governance	3.87	1.07	3.83	1.03	0.17	0.868
Increase demand for forensic accountants	3.63	1.25	3.45	0.86	0.82	0.416
Make students more desirable in the marketplace	3.80	0.96	3.36	0.93	2.07	0.042*
Satisfies society’s demand for FA	3.53	1.07	3.45	0.96	0.38	0.706
Prepare students to engage in fraud examination	3.63	1.27	3.74	1.07	-0.42	0.675
Prepare students to engage in litigation support consulting	3.27	1.23	3.59	0.96	-1.35	0.182
Prepare students to engage in expert witnessing	3.43	1.17	3.64	0.97	-0.88	0.383

**Note(s):** \* = p < 0.05, \*\* = p < 0.01: Items were responded to on a scale of 1 (not at all important) to 5 (extremely important)

**Table 4.**  
Perceived importance of forensic accounting education

accounting course on a Likert 5-point scale. Table 5 summarizes participants' responses on the importance of different topics in forensic accounting.

Academicians placed the greatest emphasis on "financial statement fraud" (4.10) and the least emphasis on "conflict of interest investigation techniques" (3.47). While the weighting of any specific aspect varied, neither the group of respondents undervalued any aspect; rather, they regarded all aspects as equally important.

When academicians focused on "financial statement fraud", practitioners regarded "bribery and corruption investigation" (4.31) to be the most important aspect of education.

Practitioners gave "Business valuations and cost estimates" the least weight (3.62). They provided a higher score in the following areas: bribery and corruption investigation (4.31), financial statement fraud (4.24), fraud detection and deterrence programs (4.22), rules of evidence (4.19) and knowledge of the legal system and legal elements of fraud (4.16). Educators provided a higher score on financial statement fraud (4.10), professional standards pertaining to forensic accounting (4.00) and rules of evidence (4.00). Topics such as intellectual property fraud (3.50), business valuations and cost estimates (3.53) and careers in forensic accounting (3.57), were the least important topics according to academics; whereas interview skills and legal aspects of interviewing (3.72) and careers in forensic accounting (3.78), were the least important based on practitioners.

Significant differences were found in "analytical review procedures" and "fraud detection and deterrence programs" ( $p$ -value  $< 0.05$ ). Despite some differences between the two

Items	Academic respondents <i>N</i> = 70		Practitioner respondents <i>N</i> = 58		<i>T</i>	<i>P</i>
	Mean	SD	Mean	SD		
Analytical review procedures	3.63	1.13	4.14	0.83	-2.39	0.019*
Bribery and corruption investigation	3.90	1.32	4.31	0.78	-1.83	0.070
Careers in FA	3.57	1.04	3.78	1.01	-0.91	0.364
Conducting internal investigations	3.63	1.03	3.95	0.85	-1.53	0.129
Conflicts of interest investigation techniques	3.47	1.01	3.86	1.07	-1.68	0.097
Financial statement fraud	4.10	1.03	4.24	0.92	-0.65	0.514
Fraud detection and deterrence programs	3.73	0.94	4.22	0.80	-2.57	0.012*
Intellectual property fraud	3.50	1.07	3.84	1.04	-1.46	0.148
Internal control evaluation	3.93	0.94	4.07	0.95	-0.63	0.527
Interview skills and legal aspects of interviewing	3.67	0.88	3.72	0.95	-0.28	0.784
Professional standards pertaining to FA	4.00	1.05	4.12	0.88	-0.57	0.570
Security and privacy	3.77	0.90	4.02	0.93	-1.21	0.228
Business valuations and cost estimates	3.53	0.86	3.62	1.02	-0.40	0.690
Compliance with applicable laws and regulations	3.90	0.99	4.09	0.78	-0.97	0.337
Corporate governance	3.80	1.03	3.88	0.84	-0.39	0.699
Earnings management	3.73	1.08	3.83	0.99	-0.41	0.683
Effective report writing	3.83	1.05	3.97	1.01	-0.57	0.567
Expert testimony and expert witness techniques	3.57	1.07	3.95	0.87	-1.80	0.075
Knowledge of the legal system	3.87	0.90	4.16	0.89	-1.43	0.156
Legal elements of fraud	3.77	1.01	4.16	0.87	-1.88	0.064
Litigation consulting techniques	3.80	0.85	3.90	0.83	-0.51	0.609
Principles of ethics and corporate code of conduct	3.93	1.11	3.93	0.81	0.01	0.991
Resolution of allegations of misconduct	3.87	0.94	4.02	0.89	-0.74	0.461
Rules of evidence	4.00	0.95	4.19	0.89	-0.93	0.356
Shareholder litigation	3.87	0.97	3.90	0.95	-0.14	0.890

**Table 5.**  
Importance of covering topics in FA

**Note(s):** \* =  $p < 0.05$ , \*\* =  $p < 0.01$ : Items were responded to on a scale of 1 (not at all important) to 5 (extremely important)

categories of respondents, both respondents considered these statements as important. Considering all this, respondents believed that forensic accounting is important for detecting financial statement manipulation and fraud committed by managers to protect the interests of any stakeholders.

Previous findings indicated that there is always a disagreement about the content of forensic accounting. According to academicians, financial scandals have increased interest in fraud examinations and financial analysis. Moreover, accounting curriculum and financial accounting courses should be merged and auditing textbooks and engagements should incorporate forensic fieldwork auditing.

Academicians and practitioners were asked to rank 49 forensic accounting topics. The most important aspects, according to academicians and practitioners, are “the fundamentals of fraud” and “financial statement fraud”. Regarding the “Effective Report Writing” course, a discrepancy in ranking occurs. Practitioners ranked them third, whereas academicians placed them as low as 20. Compared to academicians, practitioners tended to give fraud-type topics lower rankings. This is in line with our study. Although practitioners acknowledged the importance of fraud examination, they placed greater emphasis on techniques for locating hidden assets, conflicts of interest investigation techniques, compliance with applicable laws and regulations, litigation consulting techniques and so on.

A logical explanation for discrepancies in both groups can be attributed to different work experiences. Also, forensic accounting is a relatively recent profession. Furthermore, it is reasonable to assume that the substantial difference between the two groups (academics and practitioners) is due to the prohibition on simultaneously working as a professor at a government (state) university in KSA and practicing in professional settings. Further, the finding related to the gap between Saudi universities’ accounting graduates and the business requirements and the market demands.

#### 4.7 The role of forensic accounting education in KSA

To investigate the role of accounting education in KSA, both the groups were asked a series of questions scored on a 5-point Likert scale. Table 6 shows that academicians and practitioners were both optimistic about the importance of forensic accounting, albeit to varying degrees.

Items	Academic respondents <i>n</i> = 70		Practitioner respondents <i>n</i> = 58		<i>T</i>	<i>P</i>
	Mean	SD	Mean	SD		
In the next decade years, KSA’s need for forensic accountants will increase	4.27	0.58	4.10	0.87	0.92	0.359
The current accounting education and training in KSA provides basic FA skills required by future forensic accountants	3.00	1.02	3.07	1.31	-0.25	0.802
To become a successful forensic accountant, one requires specific training and education that provides skills and knowledge in FA	4.07	0.83	4.36	0.72	-1.74	0.086
The quality of the current formal education provides adequate basic skills required for the growth of future forensic accountants	2.80	1.03	3.22	1.30	-1.55	0.124
Forensic accountants acquire the advanced skills required in practice only through practical experience	3.33	1.18	3.41	1.21	-0.30	0.767

**Note(s):** \* =  $p < 0.05$ , \*\* =  $p < 0.01$ : Items were responded to on a scale of 1 (strongly disagree) to 5 (strongly agree)

**Table 6.**  
Future career path for  
forensic accountants  
in KSA

What could be the reasons for this? In one of our previous analyses, we found that institutions have yet to incorporate forensic accounting into their curricula, which could explain their inability to identify the role of forensic accounting.

In addition, we can observe that respondents were undecided about the different roles played by forensic accountants. Nevertheless, both groups of respondents believed that the expansion of forensic accounting education and training in KSA will have an impact on the need for forensic accountants (mean values of 3.67 and 3.78, respectively). There was no significant difference between the two groups of respondents.

Previous studies indicated that forensic accounting education is an inevitable requirement in a complex business setting (Sun, 2018). Furthermore, the future need may swiftly increase. As a result, properly structured funding as well as institutional and administrative support can help forensic accounting education thrive. According to our findings, a properly structured education system that is in line with the needs of expert forensic accountants can make a significant contribution to the growth of this sector. We need to focus on the education system, whether or not it is properly structured. Many areas have been identified as deficient, including financial resources, institutional materials, administrative interest and support, as well as academic interest and engagement, all of which contributed to the industry's inability to thrive.

#### *4.8 Future career path and demand for forensic accountants in KSA academicians*

We surveyed practitioners and academicians to gauge their perceptions of the future of forensic accounting in KSA, as well as the perceived need. Both groups of respondents anticipated an increase in demand for forensic accountants in the next decade. Furthermore, both groups of respondents strongly agreed with the statement that there will be strong demand for forensic accounting in KSA (mean values:  $4.27 \pm 0.58$ , and  $4.10 \pm 0.87$  for academicians and practitioners, respectively).

Nonetheless, they disagreed on the issue of whether KSA's existing accounting education and training provide the basic forensic accounting skills required by future forensic accountants, despite being optimistic about the future of accounting. Both groups were skeptical that the institutions will provide the necessary skills and learning methods. Nonetheless, both groups agreed that forensic accounting requires specialized training, but existing formal education does not provide the necessary fundamental skills required for the growth of future forensic accountants.

Academicians and practitioners both strongly disagreed (mean values:  $4.27 \pm 0.58$ , and  $4.10 \pm 0.87$  for academicians and practitioners, respectively) that the existing formal education provides adequate basic skills required for the development of future forensic accountants. Furthermore, respondents from both groups agreed that forensic accountants require a practical experience to acquire advanced skills in practice. Our findings are consistent with previous studies indicating a gap between forensic accounting practice and education (Ramadhan, 2015).

## **5. Conclusions**

The current study aims to evaluate the perception of academicians and practitioners working in the field of forensic accounting in KSA regarding their knowledge of and familiarity with forensic accounting, the state of the current education and possible curriculum revisions to improve it, as well as the potential future career paths and perceived advantages of forensic accountants.

This study finds that because educational offerings are multidisciplinary, they can have an impact on forensic accounting. Educators and practitioners have different perceptions of

forensic accounting resources. The practitioners believe that the curriculum should prepare students for fraud analysis, expert witnesses and litigation service consulting. Nonetheless, there is a consensus among educators and practitioners as to the relative importance of various facets of education in forensic accounting. The respondents also stated that the demand for forensic accountants will continue to increase. This should be considered by curriculum designers when planning curricula and students will also find this information helpful when selecting a major and thinking about possible career paths.

## 6. Implications and recommendations

Our study indicates the need to improve forensic accounting education in the KSA, which should involve the implementation of special accounting courses and training programs at Saudi universities. Even though the number of accounting programs that offer forensic accounting courses is limited, they exist. Practitioners believed that practical experience, along with academic learning, is important for greater expertise. As the demand for forensic accountants continues to grow, curriculum designers should consider this while developing curriculum, providing useful information for students when choosing a major and considering career paths.

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Description	n	%
<i>How does your department integrate FA education into the accounting curriculum?</i>		
We integrate FA topics into auditing courses	12	16.7%
We offer a separate FA course	12	16.7%
We currently do not cover FA at all	46	66.7%
Total	70	100%
<i>At what level do you think a FA course should be offered?</i>		
Undergraduate	10	13.3%
Graduate	21	30%
Both undergraduate and graduate	39	56.7%
Total	70	100%
<i>Who should teach FA courses?</i>		
Academics	9.5	13.3%
Practitioners	9.5	13.3%
Both academics and practitioners	51	73.3%
Total	70	100%
<i>Which courses should be prerequisites for a FA course?</i>		
Auditing	25	36.7%
Advanced accounting	18	23.3%
Current issues in accounting	25	36.7%
Other	2	3.3%
Total	70	100%

**Table S1.**  
Additional questions  
asked only of  
academics

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