



# Forensic Accounting Education In Bahrain: A Survey on Educators' Opinion

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**Abstract:** Since the beginning of the 21st century, the interest in forensic accounting started to increase noticeably; arguably the subject matter lends itself to the delivery of this topic in the accounting curriculum in universities. This study aims to explore the educators' opinion on the perceived importance of forensic accounting and integrating certain forensic accounting topics into the accounting curriculum in the universities in Bahrain. The study surveyed 34 accounting educators. The results indicated that the majority of the respondents are familiar with forensic accounting and expecting an increasing demand on it in the coming future. Additionally, the findings revealed that there is a consensus among all the accounting educators regarding the perceived importance of forensic accounting and integrating certain forensic accounting topics in the accounting curriculum. However, no significant differences were found among accounting educators as for the importance of forensic accounting and the integration of specific forensic accounting topics in the curriculum when they are grouped according to gender, educational level, academic rank, and years of experience. In light of these findings the study recommends that the accounting departments in Bahraini universities should be encouraged to offer a program that specializes in forensic accounting or at least offer a course in this topic in the accounting curriculum.

**Keywords:** Forensic Accounting Education, Accounting Curriculum, Educators and Kingdom of Bahrain.

## 1. Introduction

Since the well known Enron Scandal in 2001, the world wide interest in forensic accounting started to increase steadily. That in October, 2001 one of the largest companies in the US called Enron was under investigation for its accounting practices. This investigation discovered massive manipulation in the company's financial records. The company overstated its earnings in billions of dollars and understated its debt. After uncovering Enron scandal, several other scandals in giant corporations (e.g., WorldCom, Adelphia, Tyco, Xerox, Ahold), brokerage firms (e.g., Merrill Lynch) Audit firms (e.g., Arthur Andersen) were discovered (Messier et al.,

2006). These scandals affected the corporate world and rocked the users' trust in the public accounting profession. Moreover, fraudulent activities become more sophisticated to be uncovered easily which made a number of practitioners to look for pre-emptive ways that help companies to prevent any expected fraud. Accordingly, forensic accounting has been seen as one of the best solutions in uncovering and preventing any fraud actions. But, in order to form a solid base for forensic accounting, the universities must incorporate this topic in their accounting curriculums. Therefore, a number of universities in the US and other developed countries started to offer courses and programs in forensic accounting (Seda and Peterson, 2008).



But, it is not yet in the developed countries generally and in Bahrain particularly.

Forensic accounting can be defined as “the tripartite practice of utilizing accounting, auditing and investigative skills to assist in legal matters. It is a specialized field of accounting that describes engagements that result from actual or anticipated disputes or litigation” (Modugu and Anyaduba, 2013)

The proper implementation of forensic accounting can safeguard the corporations and so countries from any misappropriation. According to the report of transparency international organization, the corruption index of Bahrain dropped from a global rank of 27 in 2003 to 57 in 2013 (Transparency International, 2003). Therefore, this report indicates the need for a robust base for forensic accounting to stop or at least minimize the bleeding of the country resources. Currently, audit firms in Bahrain depend on expatriates to uncover any expected fraud. This lends itself to the need of improving the profession of forensic accounting in Bahrain to help practitioners to construct pre-emptive ways from any future fraud. In order to achieve this objective, universities in Bahrain must start the process of offering courses or programs specialized in forensic accounting.

The current practice now in the universities in Bahrain that they just integrate a small part of forensic accounting topics in some accounting courses such as financial accounting and auditing. But this would not provide the required knowledge and training for the students to get more understanding of fraud and most successful ways to uncover and prevent any fraudulent activities.

Therefore, this study aims to explore the perception of the educators in the universities in Bahrain regarding the importance of forensic accounting and the topics to be incorporated in the accounting curriculum related to this field of study.

Accordingly, the current study attempts to answer the following questions:

1. What is the educators’ opinion about the perceived importance of forensic accounting?
2. How familiar are accounting educators in Bahrain with forensic accounting? And what they do think about the future of forensic accounting?
3. What educators think of the future demand on forensic accounting?
4. What are the important topics in forensic accounting that need to be incorporated in the accounting curriculum in the universities in Bahrain?
5. Is there any significant impact of gender, educational level, academic rank, and years of experience on the perceived importance of forensic accounting and integrating some topics related to forensic accounting?

This study is expected to be used by universities in Bahrain as a reference to set up a plan to offer forensic accounting courses in their respective institutions.

## 2. Literature review

Several studies related to forensic accounting have been conducted in the developed and developing countries. For instance, Rezaei and Burton (1997) conducted a study to determine the perception of a number of academicians and certified fraud examiner practitioners in the U.S regarding incorporating forensic accounting courses in academic curriculum using a survey questionnaire. The findings of the study indicated that both academicians and certified fraud examiners had consensus on the importance of forensic accounting but they had different point of view on how to incorporate forensic accounting courses in the academic curriculum. The practitioner, suggested that forensic accounting must be taught in separate modules, whereas the academicians favoured to include the forensic accounting topics in the existing accounting courses.

Buckhoff and Schrader (2000) conducted a study to survey the stakeholders of accounting



education in the U.S about their opinion of introducing forensic accounting. These stakeholders were students, practitioners, and employers of accounting graduates. The study found that participants agreed on the importance of offering a course in forensic accounting in the accounting program. Additionally, the three stakeholders indicated that incorporating courses in forensic accounting to the accounting curriculum can add many benefits to them.

Moreover, Rezaei et al, (2003) found the same results regarding the importance of forensic accounting in the accounting curriculum. The study surveyed a number of academicians and practitioners in the U.S to determine their opinions about the importance, relevance, and delivery of forensic accounting education. The findings revealed that more universities in the U.S are planning to include the forensic accounting education in the accounting curriculum due to the increase in demand for forensic accounting. Moreover the results of this study indicated that forensic accounting education is beneficial and relevant to the accounting profession, the business community, accounting programs, and accounting students. Additionally, participants considered 49 suggested forensic accounting topics as important for inclusion into the accounting curriculum.

Seda and Peterson (2008) surveyed 1000 randomly selected academicians to investigate the extent of offering forensic accounting by the US universities. The results of the study indicated that 8 universities offer a separate program for forensic accounting in the level of undergraduate and graduate studies. The results also showed that a number of obstacles face the universities ability to offer courses or programs in forensic accounting. These obstacles mainly related to the institution such as the curriculum, administration, and faculty).

Elitas et al., (2011) conducted a study to measure the awareness of accounting instructors against forensic accountancy profession. The study surveyed 144 accounting and finance instructors in the Turkish universities. The study found that Turkey's educational infrastructures enable the country to apply forensic accountancy

profession. The study also indicated that forensic accountancy profession should be directed and organized by specialized organizations and institutions. Moreover, instructors indicated that the success on long run of this profession depends on the adoptions of new training programs by the higher education institutions. Also the instructors stated that accountants and auditors are getting insufficient training according to the profession general standards. In addition, the study also found that the instructors think that the application of this profession in Turkey will improve the accountancy profession. Another finding of this study showed that the awareness of the importance of this profession will increase through organizing seminars and activities that support the idea of forensic accounting.

Another study conducted by Zadeh and Ramazani (2012) aimed to determine the accountants' perception towards forensic accounting using a likert-scale questionnaire distributed to a number of accountants in Iran. The findings of the study revealed that the accountants in Iran don't have good knowledge of forensic accounting and so they had very low perception toward forensic accounting.

The importance of forensic accounting also can exceed any expectation that it might help countries from crimes related to financial corruption for example Abdullah (2014) conducted a study to investigate the impact of using forensic accounting in minimizing financial corruption in Iraq. The study used survey questionnaire distributed to 29 specialist lecturers from Iraqi universities. The study found that there was a significant positive relationship between forensic accounting education and the effectiveness of detecting financial corruption activities in Iraq.

In Bahrain, Hidayat and Al-Sadiq (2014) evaluated the perception of accounting practitioners on the need to offer forensic accounting across universities in the Kingdom. Using survey questionnaire distributed to 73 accounting practitioners as its research method, the study found that the respondents regard perceived benefits of forensic accounting education as very important and think certain



forensic accounting topics as very important topics to be integrated into accounting curriculum of the universities in Bahrain.

From the discussion above it is obvious that the need for forensic accounting is increasing worldwide in the past years. Several studies in developed countries have been conducted about this issue, but it is very limited in Bahrain. While Hidayat and Al-Sadiq (2014) surveyed the opinions of accounting practitioners about the importance of offering forensic accounting education in universities across Bahrain, this study attempts to gather the opinions of accounting educators in the Kingdom about the same matter. In other words, this study extends the work of Hidayat and Al-Sadiq (2014).

### 3. Research Methodology

#### A. Research method

Based on the previous literatures, it is found that most studies related to forensic accounting education used survey questionnaire as their research method. Therefore, this study uses the same method as the previous studies (Rezaei and Burto, 1997; Buckhoff and Schrader, 2000; Rezaei et al, 2003; Zadeh and Ramazani, 2012; Hidayat and Al-Sadiq, 2014).

The questions in the questionnaire are divided into four groups. The first group of questions collects demographic profile of the respondents. The second group of questions collects information about accounting educators' familiarity with forensic accounting education and their opinions about the demand for forensic accounting.

The third group of questions collects information about accounting educators' views on the benefits of forensic accounting education. The fourth group of questions collects information about accounting educators' views on the importance of integrating certain forensic accounting topics into accounting curriculum in universities in Bahrain. The third and fourth groups of questions use 5 Likert-scale types of questions.

#### B. Data collection and sample selection

The population of this study consists of all the accounting educators across higher learning institutions in Bahrain. In this study, 34 accounting instructors across universities and higher learning institutes in Bahrain are used as the sample of this study. The sample represents all universities across Bahrain. Being the smallest country in the GCC, Bahrain has limited number of accounting educators. The collected data are then analyzed using the following statistical tools:

1. The percentage of each score was computed using the following formula:

$$\% \text{ Distribution} = F/N \times 100$$

where:

F = frequency of an item or response.

N = total number of items or responses.

2. Weighted Mean - The arithmetical average when all the scores are added and divided by number of items obtained using the following formula:

$$M = \Sigma X / N$$

where:

M = mean

$\Sigma X$  = sum of the scores / measures in the series

N = number of cases

3. Analysis of Variance (ANOVA) test was applied to determine if there are any significant differences in the average weighted means obtained by the responses of the respondents when grouped according to the gender, level of education, academic rank and work experience.

The 5-point Likert scale has the following scale values:

4.50 – 5.00 Very Important (VI)

3.50 – 4.49 Important (I)



- 2.50 – 3.49 Not Sure/I don't Know (N)
- 1.50 – 2.49 Somewhat Important (SI)
- 1.00 – 1.49 Not Important (NI)

**4. Findings and Discussions**

*A. Demographic profile*

There are 34 accounting instructors participated in this survey. 31 of them (91.2%) are male while 3 of them are females (8.8%). It means most accounting instructors in Bahrain are males. In term of level of education, 21 respondents (61.8%) are Ph.D holders, 10 of them hold master degree (29.4%) and 2 respondents have bachelor degree (5.8%). In term of academic rank, 3 respondents are full professor (8.8%), 6 respondents are associate professor (17.7%), 13 of them are assistant professor (38.2%) and 12 respondents are lecturers (35.3%). In term of work experience, 6 respondents (17.7%) have less than 5 years work experience, 10 respondents (29.4%) have 6-10 years work experience, 6 respondents (17.7%) have 11-15 years work experience and 12 respondents (35.2%) have more than 15 years work experience.

*B. Familiarity with forensic accounting, sources of information and future demand for forensic accounting education*

Out of 34 respondents, 22 of them (65%) are familiar about forensic accounting. 10 respondents (29.4%) are not familiar with forensic accounting and 2 respondents (5.6%) did not answer the question. The responses indicate that the majority of accounting educators in Bahrain are familiar with forensic accounting. However, not all of them are aware. This might pose a challenge for Universities in Bahrain to offer forensic accounting courses. Surprisingly, most respondents indicate that they got information about forensic accounting from internet (26.5%). It is followed by journals and textbook (23.5%). In the third place is workshop and conference (17.6%). Both class room and colleagues came in the fourth place (14.7%) and the remaining respondents know about forensic accounting from other sources (3%). 19 respondents (56%) believe that the demand

for forensic accounting in Bahrain will increase. 7 respondents (20.6%) believe that the demand for forensic accounting in Bahrain will remain the same. Only 1 respondent (2.9%) believe that the demand for forensic accounting in Bahrain will decrease. 7 respondents (20.6%) are not sure when they are asked about the demand for forensic accounting.

*C. The importance of perceived benefits of forensic accounting education*

Table 1 below summarizes the respondents' responses regarding the importance of perceived benefits of forensic education according to accounting educators in Bahrain.

**Table 1**  
**Distribution of Accounting educators Responses about the Importance of Perceived Benefits of Forensic Accounting Education**  
**n =34**

Item	1	2	3	4	5	M	I
Strengthen the credibility of financial reporting.	0	4	5	14	11	3.91	I
Make students more desirable in the marketplace.	0	4	11	12	7	3.61	I
Satisfies society's demand for forensic accounting	1	2	8	16	7	3.73	I
Prepare students to engage in fraud examination.	0	3	2	20	9	4.00	I
Prepare students to engage in litigation support consulting.	0	3	6	17	8	3.85	I
Overall Weighted Average: 3.81							

\*The above figure is rounded

Table 1 shows that the average weighted mean of the five statements was (M= 3.81) with verbal interpretation of important. In other words, overall accounting educators who teach in higher learning institutions in Bahrain believe that having forensic accounting education at universities in Bahrain as important. All the five statements have a verbal interpretation of important. The fourth statement (Prepare students to engage in fraud examination) has the highest weighted average of (M=4.0) followed



by the first statement (Strengthen the credibility of financial reporting) in the second place with the weighted average of (M=3.91). The fifth statement (Prepare students to engage in litigation support consulting) came in the third place with a weighted average of (M=3.85). The third statement (Satisfies society's demand for forensic accounting) with a weighted average of (M=3.73) came in the fourth place and the second statement (Make students more desirable in the marketplace) with a weighted average

of (M=3.61) got the lowest score among the statements in the group.

*D. The importance of integrating certain forensic accounting topics into accounting curriculum of universities in Bahrain*

Table 2 below summarizes the accounting educators' responses regarding the importance of integrating certain forensic accounting topics into accounting curriculum of universities in Bahrain.

**Table 2**  
**Distribution of Accounting Educators' Responses about the Importance of Integrating Certain Forensic Accounting Topics into Accounting Curriculum of Universities in Bahrain.**

n =34

Item	1	2	3	4	5	M	I
<b>Forensic Accounting, Fraud and Investigation</b>							
Careers in forensic accounting	0	7	4	16	7	3.64	I
Conducting internal investigations	0	3	5	15	11	3.97	I
Financial statement fraud	1	0	4	11	18	4.30	I
Fraud detection and deterrence programs	1	2	5	9	17	4.12	I
Internal control evaluation	0	1	4	21	8	4.03	I
Weighted Average: 4.01							
<b>Legislation, Regulation and Governance</b>							
Business valuations and cost estimates	3	3	8	17	3	3.39	N
Compliance with applicable laws and regulations	0	3	5	17	9	3.91	I
Corporate governance	0	1	7	15	11	4.03	I
Earnings management	0	2	11	13	8	3.82	I
Effective report writing	1	2	8	17	6	3.73	I
Weighted Average: 3.78							
Overall Weighted Average: 3.89							

\*The above figure is rounded

The average weighted mean of the ten statements in this question is (M=3.89) with a verbal interpretation of important. It means that overall respondents believe that the above forensic accounting topics should exist in

accounting curriculum of universities in Bahrain. The ten statements are divided into two groups (1) forensic accounting, fraud and investigation and (2) legislation, regulation and governance.



Table 2 shows that all the five statements regarding forensic accounting, fraud and investigation have a verbal interpretation of important with weighted average of (M=4.01). The third statement (Financial statement fraud) has the highest weighted average of (M=4.30), followed by the fourth statement (Fraud detection and deterrence programs) with a weighted average of (M=4.12). The fifth statement (Internal control evaluation) came in the third place with a weighted average of (M=4.03). This was followed by the second statement (Conducting internal investigations) with a weighted average of (M=3.97). Finally, the first statement (Careers in forensic accounting) came in the last place with a weighted average of (3.64). Table 2 also shows that four out of the five statements regarding legislation, regulation and governance have a verbal interpretation of important with weighted average of (M=3.78). The eighth statement (Corporate governance) has the highest weighted average of (M=4.03) followed by the seventh statement (Compliance with applicable laws and regulations) with a weighted average of (M=3.91). The ninth statement (Earnings management) came in the third place with a weighted average of (M=3.82). This was followed by the tenth statement (Effective report writing) with a weighted average of (M=3.73). Finally, the sixth statement (Business valuations and cost estimates) came in the last place with a weighted average of (M=3.39). This is the only topic the accounting educators are not sure on its importance.

Comparing the two groups, the accounting educators in Bahrain are in the opinions that integrating forensic accounting, fraud and investigation topics into accounting curriculum of universities in Bahrain are slightly more important than integrating the legislation, regulation and governance. It is shown by the weighted average of the first group that stood at (M=4.01) while the second group stood at (M=3.78). However, both groups of topics are regarded as important to be integrated into accounting curriculum of universities in Bahrain.

*E. Test on significant differences in the respondents' responses when they are grouped according to gender, level of education, academic rank and years of experience*

The study uses Analysis of variance (ANOVA) to determine any statistically significant differences in the responses of the respondents about the importance of the perceived benefits of forensic accounting education and the importance of integrating certain forensic accounting topics into accounting curriculum when they are group according to gender, level of education, academic rank and years of experience. Table 3 below summarizes the results of the test when the respondents are grouped according to gender.

The results for gender in Table 3 show that both male and female accounting educators in Bahrain consider perceived benefits of forensic accounting education as important and also believe that integrating all 10 stated forensic accounting topics into accounting curriculum of the universities in Bahrain as important.

**Table 3**  
**Summary of ANOVA Test When the Respondents Are Grouped According to Their Genders**

		N	F Test	
			F-ratio	F sig.
Importance of perceived benefits of forensic accounting	Male	31	.263	.612
	Female	3		
Integrating topics in fraud and investigation	Male	31	.213	.648
	Female	3		
Integrating topics in Legislation, Regulation and Governance	Male	31	.331	.569
	Female	3		

As seen in Table 3 male educators in Bahrain have higher score than female educators in terms of perceived benefits of forensic accounting (M = 3.87 Vs M = 3.67) and integrating 5 topics of fraud and investigation into accounting curriculum of universities in Bahrain (M = 4.06 vs M = 3.87). However, female educators have higher score than male educators in the 5 topics of legislation, regulation and governance.



In other words, male educators feel fraud and investigation topics are more important to be integrated into accounting curriculum than legislation, regulation and governance topics while the female feel the other way around. The ANOVA test reveals that using a significance level of 0.05, no significant differences were found for the respondents' perception in all the above statements. This means that there are no statistically significant gender differences in the responses regarding the importance of the perceived benefits of forensic accounting education and the importance of integrating certain forensic accounting topics into accounting curriculum when they are grouped according to gender. It also means that gender does not have an influence on the level of awareness about perceived benefits of forensic accounting and on how someone values the importance of integrating forensic accounting topics into accounting curriculum.

Table 4 shows the results of ANOVA test when the respondents are grouped according to educational level. Using a significance level of 0.05, no significant educational level differences were found for the respondents' perception of the importance of forensic accounting and the topics to be integrated in accounting curriculum. As seen in Table 4 participants who hold Master or equivalent degree have the highest mean as for the importance of forensic accounting. This followed by the holder of Bachelor or equivalent degree with a mean of 3.8, finally holders of PhD or equivalent degree have a mean of 3.76 out of 5. These results indicated that the three levels of education (Bachelor, Master, and PhD) agreed on the importance of the forensic accounting course.

With regard to the educators' opinion about the topics that should be integrated in the forensic accounting course the results show that Master holders rated the importance of integrating topic in fraud and investigation more than the Bachelor and PhD holders, while the bachelor holders rated integrating topics in legislation, regulation, and governance more than the other two levels of education. But in general it can be indicated that the educators perceived these topics as important and will add value to the accounting curriculum.

**Table 4**  
**Summary of ANOVA Results When the Respondents Are Grouped According to the educational level.**

		N	F Test	
			F-ratio	F sig.
Importance of the forensic accounting	Bachelor or equivalent	2	0.44	0.65
	Master or equivalent	10		
	PhD or equivalent	21		
Integrating topics in fraud and investigation	Bachelor or equivalent	2	0.43	0.66
	Master or equivalent	10		
	PhD or equivalent	21		
Integrating topics in Legislation, Regulation and Governance	Bachelor or equivalent	2	1.07	0.36
	Master or equivalent	10		
	PhD or equivalent	21		

Additionally, Table 5 shows the results of ANOVA test when the respondents are grouped according to the academic rank. The results indicate that there is no significant difference among all ranks, this means that there is a consensus among the four ranks about the importance of forensic accounting and integrating the 10 topics related to fraud and legislation in accounting curriculum of universities in Bahrain. As seen in Table 5, Lecturers scored the highest mean among the four academic ranks as for the importance of the forensic accounting course and integrating topics related to fraud and investigation with mean of 3.96 and 4.16 respectively. Associate professors scored the highest mean as for the importance of integrating topics in legislation, regulation, and governance as well as the importance of covering topics in fraud and investigation. In third place come full professors who scored the second highest among the four academic ranks as for the importance of forensic accounting,



and the integration of topics in legislation, regulation, and governance, and the last place as for the importance of integrating topics in fraud and investigation. Assistant professor scored the lowest mean as for the importance of forensic accounting and integrating topics in legislation, regulation and governance.

**Table 5**  
**Summary of ANOVA Results When the Respondents Are Grouped According to their Academic Rank.**

		N	F Test	
			F-ratio	F sig.
Importance of the forensic accounting	Full Professor	3	0.175	0.913
	Associate Professor	6		
	Assistant Professor	13		
	Lecturer	12		
Covering topics in fraud and investigation	Full Professor	3	0.568	0.641
	Associate Professor	6		
	Assistant Professor	13		
	Lecturer	12		
Covering topics in Legislation, Regulation and Governance	Full Professor	3	1.143	0.348
	Associate Professor	6		
	Assistant Professor	13		
	Lecturer	12		

Table 6 below summarizes the results of ANOVA test when the respondents are grouped according to years of experience, as seen in this table there is no significant difference among all respondents, this means that regardless of years of experience there is a consensus among participants about the importance of forensic accounting and integrating the 10 topics related to fraud and legislation in accounting curriculum of universities in Bahrain. Accounting educators

who have less than 5 years experience scored the highest mean as for the importance of forensic accounting and the integration of the 5 topics related to legislation, regulation, and governance. But instructors who have 6-10 years of experience scored the lowest mean as for the importance of forensic accounting and the integration of topics in fraud and investigation.

**Table 6**  
**Summary of ANOVA Results When the Respondents Are Grouped According to their Years of Experience.**

		N	F Test	
			F-ratio	F sig.
Importance of the forensic accounting	Less than 5	6	0.575	0.636
	6-10	10		
	11-15	5		
	More than 15	12		
Covering topics in fraud and investigation	Less than 5	6	0.473	0.703
	6-10	10		
	11-15	5		
	More than 15	12		
Covering topics in Legislation, Regulation and Governance	Less than 5	6	0.163	0.938
	6-10	10		
	11-15	5		
	More than 15	12		

**5. Conclusions**

The survey results indicate that accounting educators who teach in higher learning institutions in Bahrain believe having forensic accounting education at universities in Bahrain as important. They are also in the opinion that forensic accounting, fraud and investigation topics and legislation, regulation and governance topics are regarded as important to be integrated into accounting curriculum of universities in Bahrain. ANOVA results also reveals that there is no significant difference in the respondents' answers when they are grouped according to



gender, level of education, academic rank and years of experience. The overall findings suggest that there is a need to offer at least one forensic accounting course across universities in Bahrain. Although, the findings of the current study reveals that the majority of the accounting educators in Bahrain believe that the future demand for forensic accounting will increase, it has been found that not all accounting educators in Bahrain are familiar with forensic accounting. This might suggest a possible human resource challenge (obstacle) in offering the courses at universities in Bahrain. The question is who will be able to teach the forensic accounting courses at the universities. This also suggests future research on the opinion of accounting educators on the obstacles to offer forensic accounting courses at universities in Bahrain. In addition, another possible future study is to conduct a comparative study between the opinion of educators and practitioners regarding the same issue.

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