Forensic Accounting Education in Bahrain: Academicians' Perceptions

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Abstract The main purpose of this study is to report academicians’ perceptions regarding the benefits, content, the mode of delivery, and the challenges facing forensic accounting education. Content analysis of course descriptions, interviews and questionnaire survey were used to collect the data. The results show that "promote responsible corporate governance" and "prepare students to engage in fraud examination" are the most important benefits of forensic accounting education. Twenty-six topics on forensic accounting were proposed to be integrated into the accounting curriculum. The respondents perceive all topics as important and the most important are: financial statements fraud, professional standards pertaining to forensic accounting, and legal elements of fraud. Lack of faculty interest was perceived as the main obstacle to providing proper forensic accounting education. Finally, there were no significant differences between respondents' characteristics (i.e., gender, educational qualifications and work experience) and their perceptions regarding the benefits and obstacles of forensic accounting. The study concludes that a model curriculum in accounting would be to include forensic accounting as a separate course in the accounting program and to be delivered at the undergraduate level jointly by both specialized academicians and practitioners.

Keywords Forensic Accounting Education, Accounting Curriculum, Academicians, Bahrain

1. Introduction

Corporate crises and failures in the twenty first century (e.g. Harris Scarfe, Rite Aid, Sunbeam, MicroStrategy, and Ananto) and the failure of internal and external audits to discover accounting scandals, have undermined investors' confidence in financial reporting and raised serious concerns over the effectiveness of financial reporting, accounting standards, and accountability. The Sarbanes Oxley Act of 2002 states that finding fraud is a priority of an audit. The detection and prevention of fraud using normal auditing procedures has become a difficult task to auditors and stakeholders. Although the role of management is to prevent fraud, the auditor should acquire the professional skills that help him detect fraud [1]. This is why professional accounting institutions and education leaders have called for more forensic accounting education for auditors [2,3]. As such, auditors need to add some of the forensic accounting skills that help them perform successful audit in the future and enhance the likelihood of fraud prevention [4].

Accounting academicians have stressed the need for better forensic accounting skills for auditors as a result of the implications of the changed regulatory and audit standard setting environment [3]. DiGabriele found that there is a level of agreement, among the three major stakeholder groups in the accounting profession (auditors, forensic accountants and accounting academics) that forensic accounting skills do have a place in the contemporary audit setting [4].

The widespread use of misappropriation of financial statements, weakness and lack of legal and accounting legislation in solving problems, weakness in traditional auditing and lack of professional institutions to provide forensic accounting services, emphasized the need for...
courses specifically focused on forensic accounting, rather than assuming that auditing courses provide sufficient training. Universities worldwide, particularly in the USA and UK, have responded to the demand to offer forensic accounting education. Many institutions have developed programs in forensic accounting, including undergraduate and graduate degrees, certification, and minor and concentration [1,2,3,4,5,6].

Higher education institutions in Bahrain do not include suitable syllabus that provides students with forensic accounting skills needed by the audit market. Research early in 2019 shows that universities in Bahrain do not cover forensic accounting education and a gap between supply and demand exists [7,8].

Direct contacts with Chairs of accounting departments in twelve higher education institutions in Bahrain revealed that only three universities cover forensic accounting in their programs. The University of Bahrain covers forensic accounting as a required topic included in a course entitled "Current Issues in Accounting". Ahlia University used to cover it in a "Contemporary Issues in Accounting" course and currently it is not covered because of lack of faculty interest. Talal Abu Ghazalah University College of Business covers it as a topic in a financial accounting course. Some universities are planning to cover it in the future and the others do not offer forensic accounting. Interviews with some faculty stated that they do not cover forensic accounting because it includes advanced material which might be difficult to students. Moreover, some of the faculty are not aware and very familiar with this multidisciplinary area of accounting. So, universities in Bahrain should offer forensic accounting education to provide students with the required knowledge and understanding of forensic accounting. This does not necessarily mean that forensic accounting must be compulsory. It should be included in accounting curriculum and offered as optional/ further studies.

Finally, although forensic accounting is not a new course and contents are well established in the accounting programs of many different countries in the USA and UK, the accounting curriculum in Bahrain universities is not well defined to accommodate forensic accounting. This would not provide the required knowledge and skills for the accounting graduates, in developing countries, to understand fraud and the methods to detect it [2,9,10].

This study provides answers to three questions:
1. What are the benefits of forensic accounting education?
2. Which topics should be included in forensic accounting education?
3. Are there obstacles in teaching forensic accounting?

The aim of the study is to examine the perceptions of accounting faculty working in Bahrain universities regarding the benefits, coverage, learning mechanisms, and the obstacles of offering forensic accounting education. This study is an extension of a previous study by Ramadhan [11] where he examined practitioners' perceptions on forensic accounting education in Bahrain.

The next section analyzes previous studies on forensic accounting education. Section three reviews the different data collection methods. Results and discussion are covered in section four and the last section provides conclusions, implications, limitations and areas for future research.

1.1. Motivation and Contribution of the Study

The study provides evidence as to what topics on forensic accounting would be appropriate and most relevant as perceived by the academicians in Bahrain. Thus, it contributes to the existing knowledge on forensic accounting and provides valuable input to higher education institutions which are considering integrating forensic accounting education into their curriculum, or redesigning their forensic accounting courses, and help in setting the future direction and role of forensic accounting education. Moreover, some researchers state that enrolment in a forensic accounting course can show students a different side of such a renowned discipline as accounting and facilitates their course choices to develop skills that employers value [12,13]. In addition, forensic accountants are trained in elements of the law relevant to the area of forensic accounting which will enable them not only to investigate accounting issues, but also collect evidence, provide litigation support, as well as testify in court [5,14]. Thus, the results of the study are expected to enhance auditors’ likelihood of fraud prevention [4]. They also improve the skills of future accounting students being trained to meet the changes in business environment and as a result, benefit the employers of accounting graduates.

Finally, professional accounting institutions, auditing firms, clients, regulatory agencies and the business community are also concerned with forensic accounting education.

1.2. The Need for Forensic Accounting Education in Bahrain

The audit profession in Bahrain is governed by the Commercial Companies Law No.21 of 2001. The legislator has recently passed several new regulations and amendments in a bid to strengthen its anti-fraud and money laundering laws. One most important is the new commercial law No. 62 of 2014. According to KPMG's fraud survey in 2014, organizations are reporting more fraud cases than in prior years. In 2014, about 75% of the companies reported that they experienced fraud incidents, an increase of 13% from 2003. Furthermore, the report of Transparency International Organization shows that the corruption index of Bahrain dropped from a global rank of 27 in 2003 to 57 in 2013 [27]. Additionally, fraud cases relating to money laundering has increased [15]. A case
involved the alleged theft of BD20 million from a telecom company is still in High Criminal Court (Gulf Daily News, May 8, 2015). Besides, fifteen men have been convicted of being part of a money-laundering racket that transferred up to BD350 million ($922.8 million) abroad. This is in addition to illegal money transfer and forging documents, embezzlement, and money laundering. A group including eleven managers and staff working for UAE Exchange illegally sent the money to Saudi Arabia (Gulf Daily News, October 2014). These examples and others, in an emerging economy like Bahrain, require more professionalism in forensic accounting. Thus, there is a need for litigation support services and investigative functions to stop or at least minimize the bleeding of the country resources and countries should develop regulations to counter such criminal phenomena and safeguard the corporations and the society from fraud, misappropriation and money laundering crimes [9,28,29,30].

2. Theoretical Background and Literature Review

2.1. Definition of Forensic Accounting

Forensic accounting is defined as an "accounting specialization in which investigative and analytical skills are applied in the areas of litigation support, expert witness and fraud examination for the purpose of resolving financial issues in a manner that meets standards required by courts of law" [16,31]. Forensic accounting is a discipline that interacts with many areas such as auditing, accounting, economics, finance and law. It provides an accounting analysis that is suitable to the court which will form the basis for discussion, debate and ultimately resolution of disputes that involve claims and American Institute of [2,32,33,34]. Another comprehensive definition states that forensic accounting is: "a multidisciplinary field that encompasses both a profession and an industry, where civil or criminal economic and financial claims, whether business or personal, are contested within established political structures, recognized and accepted parameters, and well-defined legal jurisdictions, and informed by the theories, methods, and procedures from the field of law, auditing, accounting, finance, economics, psychology, sociology, and criminology" [35].

Although fraud is absent from the definition of forensic accounting, examining for fraud is an important component of forensic accounting. Fraud examination is an investigation undertaken to determine the facts of a suspected fraud [16]. Forensic accountants explain and interpret financial information to the lawyers. They examine financial data and other evidence to report fraudulent activities [16,18]. Additionally, the accountant should possess the following skills: deductive analysis and critical thinking skills, problem solving, analytical proficiency and oral and written communication skills. They should also have knowledge in law and composure. These skills are needed to enable forensic accountants to interpret financial statements and to work under circumstances where financial information has been destroyed or tampered with [8,19].

2.2. Forensic Accounting Coverage

Previous research provides evidence that forensic accounting education is being offered as a credit course by many universities in the USA [14,20,21,22]. Other researchers reviewed course syllabi of universities offering forensic accounting courses and analyzed the level of learning objectives, course requirements, and course coverage. They found that accounting educators agree that there is a need for universities to provide forensic accounting education [23,24].

A study examined course syllabi to determine the curriculum coverage of forensic accounting and fraud investigation. The authors found that the accounting curriculum provides a knowledge acquisition base on forensic accounting as part of curriculum changes in response to the mandated (AICPA) 150-hour accounting program (AICPA, 2002). Besides, they found that academicians preferred to integrate forensic accounting topics in the existing accounting courses, but certified fraud examiners preferred offering forensic accounting as a course [22].

Another study reviewed forensic accounting education offered by some universities in the USA. He noticed that California State University has been teaching forensic accounting course as a part of its regular accounting program. [25] examined the opinions of academicians regarding the importance, relevance, and delivery of forensic accounting education. They found that the number of universities planning to include forensic accounting education in their program is increasing. Moreover, they found that academicians viewed forensic accounting as relevant and beneficial to accounting students, accounting programs, accounting profession, and business community (both practitioners and academicians) considered the (49) proposed topics as important and should be integrated into the accounting curriculum. Furthermore, students believe that forensic accounting is a sound career option but should be promoted in universities because it is not getting the proper attention [12,20].

In a survey study, it was found that universities and colleges in Nigeria are considering adding forensic accounting to their curriculum [19]. Additionally, [26] found that accountants are not familiar with the services offered by forensic accounting. They relate this to poor training provided by firms’ financial managers who have
limited knowledge of forensic accounting. A survey was carried out on American universities to discover the gaps in forensic accounting research. It was suggested that research on forensic accounting should be expanded to cover issues that fall under forensic accounting and researchers should use more types of research methods [35].

In Australia [36] stated that universities provide a diverse range of courses to teach forensic accounting. In addition [28] examined the development of forensic accounting education and found that both practitioners and academicians agree that forensic accounting should be included in accounting curricula at undergraduate level.

Bressler [37] highlighted the auditor's special skills, namely, investigating and detection with specialized forensic auditing techniques. Moreover, [4] examined the views of the three stakeholder groups in the accounting profession (auditors, forensic accountants and accounting academics) regarding the need for more forensic accounting proficiency in the audit process. He found that there is a level of agreement among the groups that forensic accounting skills have a place in the audit market.

Based on [4] study it is apparent that there are comparative differences between auditing, accounting and forensic accounting. One difference is that the audit activity is mandatory and regulated by the legislature, but the requirements for forensic accounting are not established by law. This is in addition to differences in objectives, subjects and reporting [41].

In summary, previous studies focus on the demand, contents, benefits, obstacles, and the integration of forensic accounting education into the accounting program. The literature specifies two approaches to incorporate forensic accounting education. 1) Integrate forensic accounting as a topic into financial accounting and auditing courses. 2) Offer forensic accounting as a separate course at the undergraduate level. The second approach would increase students' knowledge and understanding, and enhance the professional scepticism of accounting graduates.

The literature shows that as a response to changes in the business environment, accounting educators have been asked to change the courses, contents, curriculum, and methods of delivery to incorporate the forensic accounting skills as needed in the accounting program and satisfy the demand of the audit market. This study is different from previous studies in that it examines academicians' perceptions regarding forensic accounting education in a different setting (Kingdom of Bahrain). Moreover, it examines the relationship between academicians' characteristics (academic qualification, work experience and gender) and the benefits and obstacles in teaching forensic accounting. In addition, the findings of the study have theoretical implications in that they further add to the existing knowledge on forensic accounting.

3. Research Method

3.1. Population and Sample

The study specifically examines academicians' perceptions of forensic accounting education. At the time of this study, there were twelve higher academic institutions (government and private) in Bahrain that offer accounting courses. The total number of accounting faculty approximates (82). This number represents the population and sample of the study. Table 1 below shows the number and percentage of accounting faculty in each university/institute.

Table 1. Accounting faculty at higher education institutions in Bahrain

| No. | Name of university                     | N  | %  |
|-----|----------------------------------------|----|----|
| 1   | University of Bahrain                  | 20 | 24.4|
| 2   | Ahlia University                       | 11 | 13.4|
| 3   | Applied Science University             | 9  | 10.9|
| 4   | The Kingdom University                 | 3  | 3.7 |
| 5   | Arab Open University                   | 2  | 2.4 |
| 6   | Bahrain Institute of Banking and Finance | 1 | 1.2 |
| 7   | Royal University for Women             | 11 | 13.4|
| 8   | Gulf University                        | 3  | 3.7 |
| 9   | University College of Bahrain          | 3  | 3.7 |
| 10  | AMA International University           | 9  | 11.0|
| 11  | Bahrain Polytechnic                    | 6  | 7.4 |
| 12  | Talal Abu Ghazaleh University College of Business | 4 | 4.8 |
| **Total** |                                    | 82 | 100.0|

3.2. Data Collection Methods

It was suggested that forensic accounting researchers should use more research methods than those currently used [35]. In this study, the following data collection methods are used: websites of universities and colleges, content analysis of course syllabi and accounting programs in Bahrain and some US universities, interviews with chairs of departments and faculty of accounting, and a questionnaire survey [60].

Analysis of course contents of all universities in Bahrain and five US universities was carried out to find the offering of forensic accounting, prerequisites, and at which level the material is covered. The US universities selected were California State University-Northbridge, West Virginia University, The University of Texas at Austin, The University of Nebraska at Lincoln, and Brigham Young University. West Virginia University developed a model curriculum in forensic accounting and fraud investigation which illustrated clearly the auditing course content and auditing skills requirement. Telephone and personal interviews were conducted with
knowledgeable accounting faculty (chairs of departments and staff members) in Bahrain universities. Based on previous studies on forensic accounting [20,26], the above data collection methods, and the opinions of the interviewed faculty, a three-sections questionnaire was developed. The questionnaire included questions on the demographic data of the respondents, the future demand on forensic accounting, the proposed topics to be included in a forensic accounting course, the teaching methods, and the obstacles that might be encountered when teaching forensic accounting. Eighty-two questionnaires were distributed by hand to all faculty members who were contacted directly by the researcher and through colleagues to get their responses. Fifty questionnaires were returned completed; a response rate of 61%. Other surveys such as [6,49] did not exceed 15%.

Finally, descriptive statistics, analysis of variance (ANOVA) and Kruskal-Wallis test were used to determine if there are significant differences between respondents' characteristics and their perceptions of the benefits and obstacles of forensic accounting education.

4. Results and Discussion

4.1. Respondents' Characteristics

Table 2 below shows that the respondents possess a sufficient background in accounting education. The majority are academically qualified and hold a Ph.D. or a Master's degree or a professional qualification. Six respondents hold the first degree in accounting and one of them holds a professional qualification (ACCA). Most of the respondents, 38 (76.0%) are males and 12 (24.0%) are females, with work experience of more than 15 years (48%).

| Table 2. Characteristics of respondents (N=50) |
|-----------------------------------------------|
| 1. Gender                                      |
| a. Male                                       | 38 | 76.0 |
| b. Female                                     | 12 | 24.0 |
| Totals                                        | 50 | 100.0 |
| 2. Academic qualification                     |
| a. Ph.D.                                      | 33 | 66.0 |
| b. Master's                                   | 10 | 20.0 |
| c. Bachelor                                   | 6  | 12.0 |
| d. Other                                      | 1  | 2.0  |
| Totals                                        | 50 | 100.0 |
| 3. Work experience                            |
| a. 5 years or less                            | 16 | 32.0 |
| b. 6 – 10 years                               | 5  | 10.0 |
| c. 11–15 years                                | 5  | 10.0 |
| d. More than 15 years                         | 24 | 48.0 |
| Totals                                        | 50 | 100.0 |

4.2. The Demand on Forensic Accounting

The demand on accounting students who have qualification in forensic accounting has grown. As such, forensic accounting is becoming an attractive career opportunity. The Statement on Auditing Standards (SAS No. 99) suggests that an "auditor may respond to an identified risk of material misstatement due to fraud by assigning forensic specialists" [AICPA, 2002]. This is in addition to a survey of 100 of the largest CPA firms in the United States which showed that 60 percent of the firms indicated an increase in their forensics business (Accounting Today, 2004). Moreover, surveys by [18,42,43,44] showed that both educators and practitioners expect the future demand and interest in forensic accounting services to increase. In this regard, respondents were asked to indicate their perceptions regarding the future demand on forensic accounting. The results show that the majority (76%) perceive that the demand on forensic accounting will increase.

4.3. Benefits of Forensic Accounting Education

Five benefits were derived from previous studies (Table 3) and respondents were asked to indicate their perceptions on Likert-type scale with 5=Extremely important and 1=of no importance. The table shows that all benefits are important and received above average rating (3). The most important benefits were "promote responsible corporate governance" and "prepare students to engage in fraud examination" (an average of 3.720 each). The detection of fraud provides employment opportunities for graduates with forensic accounting skills. The results indicate that forensic accounting is associated with legal aspects such as preparing students to engage in litigation support. The benefits "increase the demand for forensic accountants" scored (3.64).

Research shows that students directly benefit from the knowledge on forensic accounting and possess more professional scepticism [44,45,46,47]. The benefit "prepare students to engage in expert witnessing" received a low above average score (mean=3.36). Another benefit added by some respondents and considered as important was "strengthen the credibility of financial reporting". However, this would be more within the remit of audit integrity and the robustness of the regulator in Bahrain. One more respondent stated that forensic accounting "raises awareness of white collar fraud".

The results are consistent with previous research which propose that forensic accounting helps in fraud prevention [48]. Others found a significant relationship between forensic accounting education and the detection of corruption activities [8,39]. Moreover, [25,38] found that forensic accounting provides employment for students and
helps restore investors' confidence in financial reports.

4.4. Forensic Accounting Education

4.4.1. Contents

Forensic accounting is a multidisciplinary field that encompasses accounting, finance, economics, information systems, law, auditing, psychology, sociology, and criminology. The unique skills of a forensic accountant suggest that forensic accounting education should include relevant topics that increase the probability of fraud detection. A list of (26) topics were selected from previous studies and content analysis of course syllabi at US universities.

Table 4 shows that respondents perceive all topics as important (i.e., scoring 3.3 or above), indicating that such topics should be covered in forensic accounting education. "Financial statements fraud", "Professional standards pertaining to forensic accounting", "Legal elements of fraud", "Fraud detection and deterrent", and "Bribery and corruption investigation" and "techniques in locating hidden assets" are the most important topics. Other topics are of lower rank but all received above average rating. For example, "corporate governance" received (3.785). This indicates that governance and compliance with regulations and ethics are effective strategies to restrict fraudulent activities. The topic received the lowest but above average rating is "litigation consulting techniques" (mean=3.317). Although "teaching interviewing skills" in forensic accounting curricula is important, this topic and "legal aspects of interview" and "effective report writing" received low ratings. Business valuation, as one of the major topics in forensic accounting, received above average rating [49,50]. It includes quantification of loss and damage, insolvency and bankruptcy, business interruption, insurance claims, mergers and acquisitions and estimation of assets and liabilities values. Finally, one respondent added that fraud risk management as a very vital topic. Another respondent suggested that topics should include "why people commit fraud and how?" but this should be covered in the first important topic in Table 4 "financial statements fraud"(mean 4.238).

In summary, the most important topics which are directly related to forensic accounting are: financial statements fraud; fraud deterrence programs; bribery and corruption, and techniques in locating hidden assets. If forensic accounting is offered as a course in the accounting program, these topics are enough to be covered. But if there is a program in forensic accounting, then all topics are relevant and should be included in the program.

| Benefits                                      | Not important 1 | Of some importance 2 | Important 3 | Very important 4 | Extremely important 5 | Mean   | SD    | Rank |
|-----------------------------------------------|-----------------|----------------------|-------------|------------------|-----------------------|--------|-------|------|
| a. Promote corporate governance               | F 0             | 3                    | 16          | 23               | 8                     | 3.72   | .82   | 1    |
|                                              | % 0             | 6%                   | 32%         | 46%              | 16%                   |        |       |      |
| b. Prepare students to engage in fraud        | F 1             | 2                    | 18          | 19               | 10                    | 3.72   | .78   | 1    |
| examination                                  | % 2             | 4%                   | 36%         | 38%              | 20%                   |        |       |      |
| c. Increase the demand for forensic           | F 0             | 0                    | 25          | 18               | 7                     | 3.64   | .91   | 3    |
| accountants                                  | % 0             | 0%                   | 50%         | 36%              | 14%                   |        |       |      |
| d. Prepare students to engage in litigation   | F 0             | 5                    | 20          | 18               | 7                     | 3.54   | .89   | 4    |
| support consulting                           | % 0             | 10%                  | 40%         | 38%              | 14%                   |        |       |      |
| e. Prepare students to engage in expert       | F 2             | 5                    | 21          | 17               | 5                     | 3.36   | .97   | 5    |
| witnessing                                   | % 4%            | 10%                  | 42%         | 34%              | 10%                   |        |       |      |

Overall mean=3.596
Table 4. Proposed topics of a forensic accounting course (N=50)

| Topic                                         | Rank | Minimum | Maximum | Mean  | SD    |
|-----------------------------------------------|------|---------|---------|-------|-------|
| 1. Financial statements fraud                 | 1    | 3.00    | 4.00    | 4.24  | .73   |
| 2. Professional standards pertaining to forensic accounting | 2    | 2.00    | 5.00    | 4.10  | .85   |
| 3. Legal elements of fraud                    | 3    | 2.00    | 5.00    | 3.98  | .840  |
| 4. Fraud detection and deterrence programs    | 4    | 2.00    | 5.00    | 3.99  | .84   |
| 5. Bribery and corruption investigation       | 4    | 2.00    | 5.00    | 3.93  | .95   |
| 6. Techniques in locating hidden assets       | 4    | 2.00    | 5.00    | 3.93  | .84   |
| 7. Conducting internal investigations         | 7    | 2.00    | 5.00    | 3.83  | .82   |
| 8. Intellectual property fraud                | 8    | 1.00    | 5.00    | 3.81  | .97   |
| 9. Earnings management                        | 8    | 2.00    | 5.00    | 3.81  | .86   |
| 10. Corporate governance                      | 10   | 1.00    | 5.00    | 3.79  | .87   |
| 11. Conflicts of interest investigating techniques | 11   | 1.00    | 5.00    | 3.76  | .93   |
| 12. Compliance with applicable laws and regulations | 11   | 2.00    | 5.00    | 3.76  | .96   |
| 13. Careers in forensic accounting            | 11   | 1.00    | 5.00    | 3.76  | 1.12  |
| 14. Rules of evidence                         | 14   | 1.00    | 5.00    | 3.76  | .99   |
| 15. Internal control evaluation               | 15   | 1.00    | 5.00    | 3.74  | .89   |
| 16. Knowledge of the legal system             | 15   | 2.00    | 5.00    | 3.74  | .91   |
| 17. Principles of ethics and corporate code of conduct | 17   | 1.00    | 5.00    | 3.73  | 1.10  |
| 18. Expert testimony and expert witness techniques | 18   | 1.00    | 5.00    | 3.67  | 1.16  |
| 19. Security and privacy                      | 19   | 1.00    | 5.00    | 3.64  | .93   |
| 20. Effective report writing                  | 20   | 1.00    | 5.00    | 3.62  | 1.13  |
| 21. Resolution of allegations of misconduct   | 20   | 1.00    | 5.00    | 3.61  | 1.14  |
| 22. Shareholder litigation                    | 22   | 1.00    | 5.00    | 3.59  | 1.02  |
| 23. Business valuations                       | 23   | 2.00    | 5.00    | 3.55  | 1.02  |
| 24. Interview skills and legal aspects of interview | 24   | 1.00    | 5.00    | 3.48  | 1.07  |
| 25. Analytical review procedures              | 25   | 1.00    | 5.00    | 3.45  | .942  |
| 26. Litigation consulting techniques          | 26   | 1.00    | 5.00    | 3.32  | .96   |

Overall average=3.454

4.4.2. Forensic accounting coverage

Respondents were asked to indicate whether forensic accounting should be integrated into other accounting courses or offered as a separate course. About (34%) of the respondents want to cover it in auditing courses. Sixty percent perceived that it should be offered as a separate course in order to give more focus and coverage of the material. Of those who want to include forensic accounting (20%) want to offer it at undergraduate level; (54%) at graduate level and 10 (20%) at both levels. [49] found that eight universities in USA offer forensic accounting at both levels, undergraduate and graduate. Two respondents stated that it should be offered as an elective course after students have completed a substantial number of credit hours in the program to ensure that they can cope with this multidisciplinary material.

As far as prerequisites for the course are concerned, the majority (31) recommended auditing alone; some recommended (9) advanced accounting and (10) recommended current issues in accounting. One respondent suggested that International Financial Reporting Standards (IFRSs) should be covered before. However, (IFRSs) are normally covered in a separate course or in other accounting courses where needed. Others added, "Ethics in Business" and "Commercial Law". Such courses are covered in the accounting programs of the universities as college requirements. An advanced auditing course could be a prerequisite for forensic accounting which provides the minimum background needed for a forensic accounting education.

Some studies found that forensic accounting education should be offered as a separate course and integrated into
both undergraduate and graduate accounting programs with more preference for graduate programs [6,10,18,49,52]. Other researchers [32,57] found that respondents (professionals and accounting students) prefer to include forensic accounting at undergraduate level. Moreover, [42,53] state that forensic accounting should be integrated into the accounting curriculum throughout auditing and other accounting courses. This suggests that instructors should coordinate with each other to incorporate forensic accounting and more than one course on forensic accounting should be included in the program [46].

Finally, it is worth pointing out that when asking the participants about the integration of forensic accounting in accounting curricula, it would be interesting to include a question about the role of professional accreditation requirements. The discussion of this role is important as it is not clear whether students studying accounting gain exemptions from the examinations of the accounting professional bodies such as the ACCA in the UK. Nevertheless, most universities in Bahrain including private universities and polytechnics applied for exemptions from some ACCA subjects and all had exemptions from 7 to 9 courses in the program. So, there was no need to include this question given that there are no courses on forensic accounting in ACCA syllabus.

Who should teach forensic accounting? The majority of respondents (more than 80%) suggest that it should be delivered by both academicians and practitioners. As such, practitioners can be invited as guest speakers to cover the practical part of the material.

4.5. Teaching Methods

Accounting faculty were asked to indicate the learning mechanisms used in forensic accounting. Table 5 shows that they agree on all methods and the most important teaching methods are research projects, cases, and guest speakers. These results indicate that traditional classroom setting is not the preferred environment for providing an effective education for the forensic accountant. In this regard, [54] states that conventional teaching methods such as lectures are not giving the required outputs and more use of engagement activities and interactive teaching methods are needed. It should be pointed out that "brain storming sessions" was added by one of the respondents as a teaching method.

4.6. Obstacles to Providing Forensic Accounting Education

Table 6 shows that the main obstacle which hinders the introduction of forensic accounting into the accounting program is "lack of faculty interest". It received above average rating of (3.18). This may be due to lack of sufficient knowledge and awareness of forensic accounting on the part of some faculty. The lack of faculty interest may be because some faculty, particularly those who do not hold a Ph.D. in accounting or do not have sufficient teaching experience or sufficient background on the topic, are not interested to teach forensic accounting. In addition, forensic accounting is a very specialized area and a multidisciplinary field which requires highly qualified faculty. Such a result indicates that the main obstacle is academic in nature. The lack of academic staff interest results in lack of necessary incentives to initiate new courses such as forensic accounting. The other five obstacles received below average rating and are not significantly a hurdle to introduce forensic accounting. For example, respondents strongly disagree that "lack of job opportunity" is an obstacle.

In general, the findings are consistent with those of [49,57] who found that academic related matters were the most important obstacle. However, [54,39] state that academic and administrative interest and support are the obstacles facing forensic accounting education. Furthermore, [50,52] reported the following perceived obstacles: lack of faculty and students' interest, limited time for additional course, material is insignificant to include in curricula, and scarcity of instructional material.

| Delivery method          | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean  | SD   |
|--------------------------|-------------------|----------|---------|-------|----------------|-------|------|
| Projects                 | 0%                | (24.0%)  | (12.0%) | (38.0%) | (26.0%)        | 4.660 | .751 |
| Cases                    | (0%)              | (2.0%)   | (10.0%) | (48.0%) | (40.0%)        | 4.260 | .790 |
| Guest speakers           | (0%)              | (8.0%)   | (14.0%) | (32.0%) | (46.0%)        | 4.160 | 1.016|
| Text books and journals  | (0%)              | (10.0%)  | (26.0%) | (34.0%) | (30.0%)        | 3.840 | 1.152|
| Field trips              | (6.0%)            | (4.0%)   | (20.0%) | (40.0%) | (30.0%)        | 3.840 | 1.253|
| Videos                   | (22.0%)           | (12.0%)  | (22.0%) | (28.0%) | (16.0%)        | 3.040 | 1.039|
Table 6. Obstacles in integrating forensic accounting into the accounting curriculum (N=50)

| Obstacles                                           | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | Mean | SD  |
|-----------------------------------------------------|-------------------|----------|---------|-------|----------------|------|------|
| a. Lack of faculty interest                         | 6.0%              | 22.0%    | 34.0%   | 24.0% | 714.0%         | 3.18 | 1.13 |
| b. Lack of resources                                | 24.0%             | 18.0%    | 26.0%   | 24.0% | 10.0%          | 2.80 | 1.12 |
| c. Lack of administrative interest and support      | 18.0%             | 32.0%    | 28.0%   | 18.0% | 4.0%           | 2.58 | .80  |
| d. Lack of job opportunities                        | 36.0%             | 18.0%    | 20.0%   | 20.0% | 10.0%          | 2.54 | 1.10 |
| e. Lack of instructional material                   | 50.0%             | 22.0%    | 16.0%   | 24.0% | 8.0%           | 1.98 | 1.11 |
| f. Lack of students' interest                       | 24.0%             | 14.0%    | 34.0%   | 24.0% | 8.0%           | 2.90 | 1.00 |

Table 7. Demographic data, benefits and obstacles-ANOVA results (N=50)

| A. Benefits                                                                 | Gender | Education | Experience |
|----------------------------------------------------------------------------|--------|-----------|------------|
|                                                                           | F value | Sig.      | F value | Sig. | F value | Sig. |
| 1. Enhance the credibility of financial reporting                         | .610    | .439      | .983     | .383 | .333    | .802 |
| 2. Promote responsible corporate governance                                 | 1.308   | .260      | .689     | .518 | .694    | .562 |
| 3. Prepare students to engage in fraud examination                         | 2.252   | .141      | .308     | .736 | .757    | .525 |
| 4. Increase the demand for forensic accountants                            | 2.198   | .146      | .589     | .560 | 1.693   | .185 |
| 5. Enable graduates to engage in litigation support                         | 6.351   | .016*     | .074     | .929 | 1.313   | .284 |
| 6. Prepare graduates to engage in expert witnessing                         | 0.922   | .343      | .611     | .548 | .485    | .694 |
| B. Obstacles                                                               |         |           |          |      |          |      |
| 1. Lack of faculty interest                                                | 1.504   | .227      | 2.044    | .143 | 1.166   | .335 |
| 2. Lack of students' interest                                              | 0.233   | .632      | .274     | .762 | .078    | .972 |
| 3. Lack of financial resources                                             | 0.537   | .468      | .917     | .408 | .690    | .564 |
| 4. Lack of administrative interest and support                             | 0.431   | .515      | 1.333    | .278 | .212    | .888 |
| 5. Lack of job opportunities                                               | 5.013   | .031*     | 1.600    | .215 | .998    | .404 |
| 6. Lack of instructional material                                          | 0.123   | .727      | .230     | .796 | 2.616   | .065 |

*Significant p≤.05

4.7. Demographic Data, Benefits and Obstacles

The statistical test, one way ANOVA was performed to examine the relationship between gender, academic qualification, and work experience and the benefits and obstacles of forensic accounting. Table 7 shows that there were no significant differences between respondents' characteristics and all benefits except the benefit "prepare graduates to engage in litigation support consulting" which was significant under gender only (p=.016). The standard deviations were small indicating that respondents (males and females) agree on the other benefits. Another significant difference between gender and the obstacles of forensic accounting is "lack of job opportunities" (p=.031). There are no significant differences among the respondents related to academic qualification and work experience.

In order to support the results of the one way ANOVA, the nonparametric Kruskal-Wallis test was performed to examine the relationship between respondents' characteristics and the benefits and obstacles of forensic accounting. This is a rank-based nonparametric test that can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal scale.

The results were identical to those of ANOVA except gender and obstacles "lack of faculty interest" and "lack of job opportunities" where there are significant differences at the .05 level (P=.01 and .02 respectively). In addition, there is also a significant difference between respondents of different work experience and the obstacle "increase the demand for forensic accountants" and "prepare graduates to engage in litigation support" (p=.02 for both). This may be due to the lack of interest on the part of some faculty members particularly those who are not familiar with this specialized area. Nevertheless, respondents agree on the other benefits and obstacles.

5. Conclusions

This study examines academicians' perceptions regarding the identification of topics, benefits, teaching methods, and obstacles of teaching forensic accounting. Respondents perceive that all proposed topics, especially those directly related to forensic accounting are important
and should be covered in forensic accounting education. However, when developing forensic accounting course material, the opinions of the different stakeholders should be considered (e.g., auditors, accounting academics, forensic accountants, regulatory bodies, and accrediting agencies). This is in addition to the resources available and the need for change.

The findings of the study also show that respondents perceive forensic accounting as beneficial to students, audit profession and the business community. Textbooks, cases, and research projects are the most important forensic accounting teaching tools. Lack of faculty interest is the most important obstacle to integrate forensic accounting into the accounting program. This represents a human resource challenge as most of the accounting academics in Bahrain are not familiar with the different technical issues of forensic accounting. A possible solution to this obstacle would be to cooperate with other departments in the universities such as law and criminal justice [6]. Each concerned department will cover its applicable part of forensic accounting education, rather than requiring the faculty in the accounting departments to be familiar with all aspects of forensic accounting and cover the whole material. Moreover, there were no significant differences between demographic data and the benefits and obstacles of forensic accounting education. Therefore, it can be concluded that such characteristics do not influence respondents' perceptions on the benefits and obstacles of forensic accounting.

Finally, respondents perceive that the demand on forensic accounting, as a means to detect and prevent fraudulent activities, is expected to increase in the future. This suggests that auditors need to add some of forensic accounting skills to their professional profile to cope with the changing requirements. Contrary to expectations, the findings reveal that most universities in Bahrain do not integrate forensic accounting into their curriculum and a gap still exists between what is needed in the audit market and the topics included in accounting programs. As such, a model curriculum in accounting would be to align forensic accounting curriculum to market expectations. Universities in Bahrain should include forensic accounting at undergraduate level. In addition, auditors should be trained in forensic accounting procedures in order to increase their awareness of the importance of forensic accounting skills and enhance their abilities to prevent fraud.

It is also important that the views of the three main stakeholders' groups of the accounting profession (auditors, accounting academics, and forensic accountants) be investigated to determine if they agree on more forensic accounting proficiency in the job profile of the auditor as required by regulatory prescriptions and audit standards. Forensic accounting proficiency represents a shift on the job skill requirements for the accounting profession. Based on a unified agreement, the opinions of stakeholders are significant because they are positioned to advance the accounting profession [4].

5.1. Implications

The results of the study provide useful information for faculty members and universities working to integrate forensic accounting education in their curriculum. This has a high potential to enhance graduates' skills and competencies in fraud examination and prevention. The accounting profession and the business community are also concerned with financial reporting and the need to restore their confidence in the audit profession and accounting standards. Many people question why internal accountants and internal and external auditors did not detect and report wrongdoing early so that corporate failures could have been avoided. It is also important that universities invest in forensic accounting in terms of infrastructure, educational material, training, retaining faculty members and cooperate with professionals to integrate forensic accounting into the accounting curriculum. These resources are important to satisfy society's demand for forensic accounting education.

5.2. Limitation

A limitation of this study is that the proposed contents of the forensic accounting course are limited to (26) topics. Although these topics were based on previous research and content analysis of course syllabi, it is possible that this list of topics does not include all relevant topics that should be covered [56]. Although these topics were based on previous research and content analysis of course syllabi, it is possible that this list of topics does not include all relevant topics that should be covered [56]. Nevertheless, respondents were asked to add any other topics they feel relevant and important.

5.3. Directions for Future Research

Future research is needed to investigate the extent of growth of forensic accounting services and the growth in the demand for such services. It would also be interesting to investigate forensic accounting services provided by professional organizations such as auditing firms. Moreover, respondents stated that "lack of faculty interest" as a main obstacle in teaching forensic accounting. This result deserves further investigation. Further research could explore the views of employers regarding forensic accounting. Finally, as forensic accounting is a multidisciplinary field, [53] state that it is both appropriate and necessary that forensic accounting research be conducted on all aspects of the field and disciplines contributing to and informing the field of forensic accounting. Furthermore, research on forensic accounting would be expected to use all research methods, customarily used in the disciplines, contributing to the
field of forensic accounting.

5.4. Recommendations

Universities in Bahrain do not respond and meet the demand on forensic accounting. As such, accounting departments at universities and colleges should include forensic accounting education at the undergraduate level and include the material either in other related accounting courses or as a separate course. Regulatory agencies and accounting faculty need to create multidisciplinary fraud examination and forensic accounting tracks to meet the demand on future forensic accountants. Traditional lectures as a teaching method should be supplanted with teaching approaches that engage students and enhance their critical thinking skills such as cases and oral and written communication. The material should be delivered jointly by both specialized academicians and partially by practitioners.

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