Obstacles Facing the Development of Forensic Accounting Curricula within the Australian Universities: Exploring Perspectives of Practitioners and Educators

Hashem Al-Shurafat[1], John Sands[2], Gregory Jones[3] and Claire Beattie[4]

Abstract

Forensic accounting education has become an increasingly significant issue in recent years. In Australia, universities have acknowledged the industry's growing relevance, and there have been attempts to address gaps in the provision of forensic accounting education. Despite these efforts, forensic accounting education is frequently omitted in university programs. This paper seeks to identify the obstacles that influence the transformation of forensic accounting knowledge into university programs. To do so, this study explores the perspectives of two groups: forensic accounting practitioners and university academics. Simi-structured interviews were conducted with the two groups to gather their perception. The findings show that the interdisciplinary nature of forensic accounting, the educator's relevant experience, and some other factors (e.g. university timetabling, calendar, venue arrangements, lack of forensic accounting instructional material, and professional and educational accreditations) are all obstacles facing the development process of forensic accounting. It is recommended for schools that do not have the required resources or are facing many obstacles in integrating forensic accounting education to offer an introductory elective course in the curriculum or utilize appropriately qualified guest speakers. The findings in this qualitative study could help educators in the development process of forensic accounting curricula.

Keywords: Forensic Accounting, Curricula Development, Australia

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[1] Department of Accounting, Business School, The Hashemite University, Zarqa, Jordan.
[2] School of Commerce, University of Southern Queensland, Toowoomba, QLD, 4350, Australia
[3] University of Southern Queensland, Australia
[4] Department of Financial and Business Systems Lincoln University, Christchurch, New Zealand

1. Introduction

An increasing number of accounting employers seek students equipped with forensic knowledge (Alshurafat, Al Shbail, & Mansour, 2021; Alshurafat, Beattie, Jones, & Sands, 2020; Hegazy, Sangster, & Kotb, 2017; Rezaee, Wang, & Lam, 2018). The increased demand for, and growing importance of, forensic accounting graduates has been attributed to corporate failures and fraud (J. Van Akkeren & Buckby, 2017). In addition, commentators have noted that forensic accountants add value to the forensic accounting profession as the nature of forensic accounting practice and education includes investigative and adversarial work (Wahyuni-TD, Haron, & Fernando, 2021) and technological assignments (Alshurafat, Al Shbail, & Almuiet, 2021). Therefore, this paper is motivated to explore the obstacles affecting the development of forensic accounting curricula. Moreover, this paper informs readers of the reasons forensic accounting education is taught on an ad hoc basis and inconsistently in Australia, as found by Alshurafat, Beattie, Jones, & Sands (2019a). Thus, this is articulated in the following research question:

> *Research question: what are the factors that contribute to the development of forensic accounting curricula?*

The exact nature of what is encompassed by forensic accounting is fragmented due to its interdisciplinary origins and its recent emergence as a separate discipline (Alhusban et al., 2020; Alshurafat, Al Shbail, & Mansour, 2021; Botes & Saadeh, 2018). Training in forensic accounting requires an interdisciplinary approach, which includes foundation knowledge in accounting, auditing, law, criminology, and technology (Alshurafat et al., 2020; Ramamoorti, 2008). Moreover, forensic accounting education requires the contribution of diverse disciplines to build on existing expectations and advance new ideas and techniques (Kresse, 2008; Rezaee & Wang, 2019). However, it is unclear how these aspects should be tailored and presented in a logical framework that allows students to develop the necessary practical knowledge.

Forensic accounting gains its importance from the adversarial and investigative roles of its practitioners (Alshurafat, Al Shbail, & Almuiet, 2021; Alshurafat, Al Shbail, & Mansour, 2021; Cooper & Kawada, 2022; J. K. Van Akkeren & Tarr, 2021; Wahyuni-TD et al., 2021). Therefore, forensic accounting is deemed an appropriate tool to prevent and detect financial misconduct (Alshurafat, 2021; Mehta, Mittal, Gupta, & Tandon, 2022). The Association of Certified Fraud Examiners (ACFE) presented the "Occupational Fraud 2022: A Report to the Nations", based on 2,110 real occupational fraud cases across 133 countries, including 23 major industry categories. The report shows that the occupational fraud lasted 12 before being detected and caused a median loss of 117,000 US dollars. The reported fraud cases caused total losses of more than 3.6 billion dollars worldwide, with 5% of organizations' annual revenues lost due to fraud. Forensic accountants are trained and educated to prevent fraud (Ozili, 2020b). Prior studies have shown that organizations that equip staff with forensic accounting education have an increased ability to avoid financial misconduct (Carpenter et al. 2011).

University educators have begun to devote significant attention to forensic accounting education (Michael & Kramer, 2014; Prabowo, 2021). However, their preconceptions of what graduates need to know may not match the expectations and requirements of forensic accounting employers. Consequently, there is little consensus on what should be included in the core and multi-disciplinary subjects of forensic accounting curricula (Rezaee, Crumbley, & Elmore, 2004; Rezaee & Wang, 2019; Smith & Crumbley, 2009).

Australia has been chosen as a context for this study due to the paucity of studies conducted in that country compared to similar countries in the British-American context. Limited prior research in the Australian context provides evidence on universities' forensic accounting

curricula (Alshurafat, 2021; Alshurafat et al., 2020; Botes & Saadeh, 2018; Tarr, Van Akkeren, & Buckby, 2016). This is coupled with recent increased interest in forensic accounting in Australia, both in the field of practice and education (Alshurafat, 2021; Tarr et al., 2016). For example, J. Van Akkeren, Buckby, and MacKenzie (2013) reported that the perception of forensic accounting education in Australia varies widely on the optimal way for this area of the accounting profession. In addition, they reported that forensic accounting practitioners in Australia offer complex services, contributing uniquely to the international forensic accounting literature. Moreover, J. Van Akkeren and Tarr (2014) asserted the availability and growth of forensic accounting and its practitioners providing a wide range of services. Many other researchers have supported these results (Alshurafat, 2021; Tarr et al., 2016; J. Van Akkeren & Buckby, 2017; J. K. Van Akkeren & Tarr, 2021). Australian universities could benefit from other international universities' experience in formulating forensic accounting curricula. However, this should be cautioned by the fact the education of forensic accounting in Australia should be tailored to match the expectation of Australian forensic accounting industry (Alshurafat et al., 2020).

In addition, due to increased fraud and cybercrimes in the Australian business context, there is evidence of a growing demand for specialists skilled in the field of forensic accounting (Howieson, 2018; J. Van Akkeren et al., 2013). Therefore, the results of this study contribute to the forensic accounting literature and the practice of forensic accounting by merging practitioner and academic insights in this field of study.

In the Australian context, prior research has shown a significant variation in universities' forensic accounting curricula (Alshurafat, 2021; Alshurafat et al., 2020; J. Van Akkeren et al., 2013). This is likely replicated globally (Kramer, Seda, & Bobashev, 2017; Wang, Lee, & Crumbley, 2016). This research aims to contribute to the development of consistent forensic accounting curricula. This paper assumes that forensic accounting curricula need to be offered in a consistent way that could enhance the employability and mobility of forensic accounting graduates in the Australian forensic accounting industry because specializations in forensic accounting need a variety of skills and knowledge to meet the identified different range of roles for forensic accountants, e.g., reviewing financial records and information in a post-acquisition dispute, assessing economic damages, providing expert witness evidence, calculating bankruptcy and computer forensics (Denhere, 2022; Kaur Sood & Grima, 2022) and bearing in mind that each forensic accounting program and/or stand-alone subject should not be an exact replica of that offered at another university. However, having major variations in forensic accounting programs and stand-alone courses is a matter that needs to be reined in if educators want to consider the employability and mobility of forensic accounting graduates.

The purpose of this research is to provide multiple contributions in the domain of forensic accounting education and profession. First, in terms of contribution to the literature, prior researchers have accounted for different educational issues in forensic accounting education (Prabowo, 2021; Rezaee & Wang, 2022). However, what hinders universities from offering forensic accounting education remains controversial. Therefore, this research aims to provide a novel investigation into the obstacles to developing a forensic accounting curriculum at the higher education level. Second, the forensic accounting profession faces various obstacles in gaining recognition; one is attracting competent and qualified prospect practitioners (Alshurafat, Al Shbail, & Mansour, 2021). Therefore, this research aims to enhance the forensic accounting profession by formulating forensic accounting courses and programs of study that would equip the profession with competent and qualified prospect practitioners.

The remainder of this paper is structured as follows. The next section reviews the relevant literature. Details of the research design and the methodology are contained in section three.

The findings from this study and the discussion of the findings are explained in section four. Finally, the summary of the findings, implications, and guidance for future research is presented in the final section.

2. Literature Review

2.1 Forensic Accounting Definition

Forensic accounting has been defined in various ways in the literature (Alshurafat, 2021; Botes & Saadeh, 2018; Sahdan, Cowton, & Drake, 2020). However, Rezaee et al. (2004, p. 194) provide a well-accepted definition of forensic accounting, which encompasses all forensic accounting roles:

> *The practice of rigorous data collection and analysis in the areas of litigation support consulting, expert witnessing, and fraud examination*.

Other researchers limit the definition of forensic accounting to its litigious role, such as Bologna and Lindquist (1995), who define forensic accounting as using financial and investigative skills to resolve legal problems. Additionally, some commentators define forensic accounting according to its role in detecting fraud and financial misconduct (Carpenter, Durtschi, & Gaynor, 2011; Sahdan et al., 2020). The variations in these definitions of forensic accounting are likely reflected in the content of forensic accounting curricula within Australian universities. This leads to contention around which forensic accounting topics should be included in the curricula, particularly in the context of multi-disciplinary knowledge.

2.2 The interdisciplinary nature of forensic accounting studies

From the varied definitions of forensic accounting, it is noted that a forensic accounting course will incorporate more than accounting knowledge. Indeed, forensic accounting is described as an interdisciplinary field of practice. Fradella, Owen, and Burke (2007) advised educators to avoid placing the word 'forensic' in the course title if the course only covers traditional accounting knowledge with no forensic applications. Educators should acknowledge the interdisciplinary nature of forensic accounting when developing the course. This interdisciplinary nature has many reflections on forensic accounting education and profession. First, the interdisciplinary nature of forensic accounting has expanded the scope of forensic accounting services (Alshurafat, Al Shbail, & Mansour, 2021; Odia & Akpata, 2021; Wahyuni-TD et al., 2021). Thus, forensic accountants are developing a wide set of knowledge and skills to complete their assignments (Carnes & Gierlasinski, 2001; Davis, Farrell, & Ogilby, 2010; Gbegi & Adebisi, 2014; McMullen & Sanchez, 2010). Second, the interdisciplinary nature of forensic accounting causes difficulty in offering a comprehensive educational program in forensic accounting. Third, the interdisciplinary nature of forensic accounting leads to inconsistent educators' perceptions of the curriculum content and pedagogical approach to forensic accounting educational programs (Alshurafat et al., 2020).

The forensic accounting educational program is expected to focus on fraud, litigation support, business valuation, and I.T. forensics (Hegazy et al., 2017; Kramer et al., 2017; Rezaee & Wang, 2019; Tiwari & Debnath, 2017). Many prior studies explored the four main forensic accounting components. The literature suggested that the scope of the forensic accounting topics includes 21 subjects. Among these 21, the authors concentrate on fraud-related topics such as fraud investigation, detection and deterrence. Prior researchers provided different opinions. For example, Souza (2017) suggests emphasizing teaching business valuation,

damages quantification and the litigation role of forensic accounting. Rezaee and Wang (2019) recommended more attention to forensic accounting education within the technological environment. Likewise, as forensic accounting is an interdisciplinary profession, a forensic accountant should comprehend the fundamentals of psychology, criminology, ethics, and sociology (Heitger & Heitger, 2008; Ramamoorti, 2008).

2.3 Forensic Accounting Practice

To develop a relevant and sound forensic accounting curriculum, it is necessary to comprehend the intrinsic requirements and structure of forensic accounting practice (Honigsberg, 2020; Matson, 2016; Sahdan et al., 2020; Yang & Lee, 2020). Forensic accounting tasks can be classified into four main categories. However, a forensic accounting practitioner is not typically expected to master all forensic accounting practices. These tasks are litigation support, business valuations, fraud investigations, and I.T. forensic accounting (Alshurafat, Al Shbail, & Mansour, 2021; Heitger & Heitger, 2008; Pearson & Singleton, 2008; Ramamoorti, 2008; Rezaee et al., 2018).

Litigation services include analyzing complex financial transactions and presenting evidence to court regarding civil and criminal matters, placing forensic specialists at the forefront of financial litigation and business dispute resolution processes (DiGabriele, 2008; Prabowo, 2021). In court, forensic accountants are required to act as consultants, provide expert witness testimony, or perform other roles, such as court-appointed expert, referee, arbitrator, or mediator (Huber, Domino, Stradiot & Webinger, 2015). An expert witness can be defined as an expert capable by virtue of specialized knowledge and skill to assist in illustrating and communicating conclusions of facts in areas beyond the understanding of an average person, which forensic accountants are uniquely qualified for (Rezaee, Lander & Gavin, 1992; J. K. Van Akkeren & Tarr, 2021). Crumbley (2019) identified various litigation services that a forensic accountant can provide, including arbitration, mediation, and family law services. Abdul-Baki (2019) explored the role of forensic accounting in dispute resolution using a contextualized explanation of a case study. The author revealed that the forensic accountant was able to resolve the conflict using forensic accounting tools and techniques.

Forensic accountants also provide investigative services (Ozili, 2020a, 2020b; Sahdan et al., 2020; Yang & Lee, 2020). Forensic accountants perform a significant role in detecting, preventing, and prosecuting individuals involved in criminal activity at the individual, corporate and governmental levels (Carpenter et al., 2011; Kern & Weber, 2016). Other investigative services that forensic accountants provide may encompass anti-corruption, anti-bribery investigation, and other kinds of financial crime (Hegazy et al., 2017; Peltier-Rivest & Pacini, 2019; Tiwari & Debnath, 2017). Honigsberg (2020) summarised the tools for a forensic accountant to detect fraud, including statistical abnormalities and accounting-based predictors. This contributes to the growing knowledge about the capabilities of forensic accounting practice to meet the increasingly complex fraud challenge (Sahdan et al., 2020; Yang & Lee, 2020). Peltier-Rivest and Pacini (2019) report on the effectiveness of using forensic accounting techniques to detect fraud within the healthcare/ pharmaceutical sector. Blythe and Goodpasture (2019) assert this claim in their investigation of forensic accounting's role in detecting fraud in the health sector. Overall prior researchers have highlighted the role of forensic accounting in the effort to fight fraud and financial misconduct (Crumbley, 2019; Kern & Weber, 2016; Ozili, 2020a; Öztürk & Usul, 2020; Yang & Lee, 2020).

Business valuation is a key task within the forensic accounting domain (Cooper & Kawada, 2022; Huber & DiGabriele, 2015). Forensic accountants provide the analysis used to quantify the losses and damages that have occurred through circumstances such as business interruption, breach of contract, lost profit, bankruptcy, and insolvency risk assessment (DiGabriele, 2009, 2012). In addition, forensic accountants deliver business valuation assessments. These assessments may be used for insurance claims, reconstruction of accounting records (Grubb, 2015, 2017), and mergers or acquisitions. Forensic accountants may also be asked to deliver estimates relating to the value of the intellectual property (DiGabriele & Lohrey, 2016; Jalilvand & Kostolansky, 2016). However, business valuation services are rarely detailed in the forensic accounting literature. Moreover, business valuation services are usually considered a subcategory of litigation services, not the primary category (Crumbley, 2019). This limits an understanding and recognition of this role as a separate and important field of work.

The provision of I.T. forensics also falls within the remit of forensic accounting (Alshurafat, Al Shbail, & Almuiet, 2021; Öztürk & Usul, 2020). Forensic accountants are conscious of the necessity and advantages of using information technology in their work (Cook & Clements, 2009; J. Van Akkeren et al., 2013). The typical auditor may not possess the skills necessary to provide I.T. forensics (Lois, Drogalas, Karagiorgos, & Tsikalakis, 2020). Specialist forensic accountants distinguish themselves using various types of cyber evidence, such as fingerprints in metadata and email header data. Evidence used by forensic accountants could also exist in hidden data located on storage devices (Cook & Clements, 2009). Therefore, forensic accountants in the I.T. field provide the expert knowledge necessary to detect and analyze information within I.T. systems.

Prior researchers have focused on the extent and benefit of using I.T. tools to detect fraud (Akinbowale, Klingelhöfer, & Zerihun, 2020; Lois et al., 2020; Öztürk & Usul, 2020). I.T. forensic tools have been widely used by forensic accounting practitioners. For example, Abdul-Baki (2019) described how I.T. solutions could be used in forensic accounting work. The author reported that an agent of PricewaterhouseCoopers (PwC) used different problem-solving techniques (data gathering and fact-finding) to resolve a commercial dispute. Akinbowale et al. (2020) developed two innovative approaches to combating fraud using forensic accounting techniques. The authors assert the necessity of I.T. tools to assist forensic accounting practitioners in combating fraud. They argue that forensic accountants need to be able to analyze data and accounting records to uncover anomalies or query a database. Still, the highly technical fingerprints in metadata is generally left to the computer forensic experts.

2.4 Forensic accounting accreditations and certifications

Prior studies have revealed multiple obstacles to the forensic accounting profession and certification industry that negatively impact the employability of forensic accountants (Brennan, 2014; Huber, 2013a, 2013b, 2014; Tarr et al., 2016). Though the forensic accounting profession suffers from some obstacles in terms of profession regulation (Alshurafat, Al Shbail, & Mansour, 2021), different associations provide different certifications covering all forensic accounting engagements. For instance, the Association of Certified Fraud Examiners offers the certified fraud examiner (CFE) certification, the world's largest anti-fraud organization with nearly 60,000 CFEs. In addition, the Association of International Certified Professional Accountants AICPA offers the Certified in Financial Forensics (CFF) Credential to qualified CPAs to qualify as competent practitioners in the fraud investigation area (Barnes, 2020).

Domino, Giordano, and Webinger (2017) named more forensic accounting certifications such as Certified Forensic Accountant (Cr. F.A.), Accredited in Business Valuation (ABV), Certified Forensic Accountant (CRFAC), Certified Fraud Specialist (CFS), and Certified Professional Forensic Accountant (CPFAcct). In the U.S. context, Huber (2013a) named other forensic accounting certifications, for instance, the Certified Financial Crimes Investigator (CFCI), the Certified Financial Crime Specialist (CFCS) and the Certified Anti-Money Laundering Specialist (CAMS).

2.5 Forensic Accounting Education

In the forensic accounting education literature, it has been noted that forensic accounting curricula are not consistent in their contents and offering modes across different universities (Alshurafat, Beattie, Jones, & Sands, 2019ba Alshurafat et al., 2020; Prabowo, 2021; Smith & Crumbley, 2009; J. K. Van Akkeren & Tarr, 2021). The interdisciplinary nature of forensic accounting practice poses challenges for education providers in developing the curricula (Alshurafat et al., 2020; Honigsberg, 2020). According to Kresse (2008), finding a proper balance between accounting, law, psychology, sociology, and criminology is challenging. Forensic accounting curricula designers are faced with the issue of incorporating aspects from a range of disciplines, and each discipline has much to learn from the others.

Smith and Crumbley (2009) argue that forensic accounting education has been negatively affected by stakeholders' conflicting views on what should be included and how it should be offered. This is consistent with the results of research conducted by Rezaee and Burton (1997), who show a significant variation in views between two groups (academics and practitioners) regarding the content of forensic accounting curricula. In addition, the authors named other factors such as the lack of flexibility in curriculum content, lack of instructional materials and textbooks, lack of administrative interest and support, lack of faculty interest, lack of authoritative standards and guidelines, and the lack of student interest as obstacles to forensic accounting education (Alshurafat, Al Shbail, & Mansour, 2021). These results were reinforced by a later study that produced similar results (Alshurafat, 2021; Rezaee et al., 2004).

Initiatives to construct robust forensic accounting education programs appear to be more advanced in the North American environment than in Australia and other countries such as the U.K. and China (Alshurafat, Al Shbail, & Mansour, 2021). There is also evidence that forensic accounting education has been debated in the USA literature since the early 1990s. For instance, Rezaee et al. (1992) proposed four solutions that could be used to promote and improve forensic accounting offerings. First, they suggested that forensic accounting be combined into the 150-hour accounting program[5]. Second, forensic accounting education should convey and teach specialized knowledge and promote and develop fraud investigation processes and techniques. Third, accounting departments at universities should take the initiative in developing the forensic accounting curriculum. Fourth, practitioners specializing in forensic accounting services should periodically support universities that offer forensic accounting courses to ensure alignment between forensic accounting education and practice.

The importance of forensic accounting education was reflected in a special issue on fraud and forensic accounting education published in November 2008 by Issues in Accounting

[5] To become a Certified Public Accountant (CPA), an individual needs 150 college credit hours, of which at least 120 hours are associated with a bachelor's degree. Many institutions offer a 30-hour master's program beyond their undergraduate curricula in which students become CPA eligible while simultaneously earning a master's degree.

Education. It provided information and examples for universities considering offering courses, concentrations, or majors in forensic accounting. The special issue encompassed studies that provided narrative stories about some universities' experiences in providing forensic accounting education (Curtis, 2008; Kresse, 2008; Young, 2008). Other studies in the same special issue proposed (a) a sample forensic accounting curricula model (Kranacher, Morris, Pearson, & Riley Jr, 2008), (b) knowledge to be integrated into forensic accounting curricula, such as ethics and litigation (Heitger & Heitger, 2008), (c) I.T. forensics (Odia & Akpata, 2021), as well as (d) psychology and sociology of fraud (Ramamoorti, 2008).

More recently, researchers in other geographical regions outside the U.S. have advanced the debate on the formulation of forensic accounting curricula (Botes & Saadeh, 2018; Howieson, 2018; Rezaee, Lo, Ha, & Suen, 2016; Sahdan et al., 2020; Tiwari & Debnath, 2017; Wang et al., 2016). Universities in many countries worldwide, including Australia, Brazil, China, Hong Kong, Ireland, Lebanon, New Zealand, South Africa, UK, have begun to incorporate forensic accounting topics in their teaching programs (Alshurafat et al., 2020; Botes & Saadeh, 2018; Hegazy et al., 2017; Kramer et al., 2017; Rezaee et al., 2016; Wang et al., 2016).

An Australian study by J. Van Akkeren et al. (2013) reported the level of forensic accounting program delivery. They found few dedicated forensic accounting programs, single units, and minors or majors. They point to the University of Wollongong, Melbourne University, Monash University, and Queensland University of Technology (postgraduate degrees) as pioneers in teaching forensic accounting in the Australian context. More recently, Alshurafat et al. (2019a) reported an increasing number of Australian universities teaching forensic accounting. They found "nineteen stand-alone courses of forensic accounting offered by thirteen universities," and "four universities offer five programs which encompass twenty-four courses in total". According to J. Van Akkeren et al. (2013), there is a major variation among forensic accounting courses' content and delivery modes within Australian universities. This claim has been supported by a later study on forensic accounting education in the Australian context (Alshurafat et al., 2020; J. K. Van Akkeren & Tarr, 2021).

2.6 Literature Summary

Prior research has yielded recommendations that advance the necessity of developing a forensic accounting curriculum that embraces the broad area of specialities within the forensic accounting field (Crumbley, 2019; Curtis, 2008; Honigsberg, 2020; Ramamoorti, 2008; Rezaee & Burton, 1997). The literature review highlights four categories of practice for forensic accounting: investigation services, business valuation, litigation services, and I.T. Forensics (Alhusban et al., 2020; Alshurafat, Al Shbail, & Mansour, 2021). Consequently, the broadness of practice has led to a poor definition of forensic accounting education (Botes & Saadeh, 2018) and a lack of consistency in the curricula content between universities (Seda & Kramer, 2015; Smith & Crumbley, 2009). In addition, there are multiple barriers to the consistent delivery of forensic accounting education (Alshurafat et al., 2020; Kramer et al., 2017; Ramamoorti, 2008; Rezaee et al., 2016; Seda & Kramer, 2015; Wang et al., 2016; Young, 2008). Other barriers identified by prior research include the lack of financial resources, lack of flexibility in curriculum content, lack of instructional materials, and lack of faculty interest (Rezaee & Burton, 1997; Seda & Kramer, 2009).

Prior research suggests a collective understanding of the important considerations when developing forensic accounting education. Thus, it is timely for this research to focus primarily on identifying the key obstacles likely to influence the formation and structure of forensic accounting curricula. The research question aims to address the calls from the prior research to examine the challenges that affect the development process of forensic accounting curricula.

3. Research Design

This research reflects the understanding that a qualitative research design within an educational setting can aid educators in understanding curriculum issues. This research collects data from two coherent multi-sited groups (Stake, 1995) to inform a research question related to how and why something occurred (Yin, 2009).

3.1 Method

This research used a qualitative approach to systematically investigate the curriculum formation of forensic accounting education in the Australian university context. Many of the prior forensic accounting studies used questionnaires to investigate forensic accounting education and the views of academics and practitioners on forensic accounting curriculum development (Abdulrahman, Ab Yajid, Khatibi, & Azam, 2020; DiGabriele, 2008; Rezaee et al., 2016; Wang et al., 2016). In contrast, this study collected qualitative data through semi-structured interviews with forensic accounting academics and practitioners to examine differences in the beliefs of what content should be included in forensic accounting education. Human Research Ethics Committees' Approval No. H17REA008 applies to this study.

Because of the scarcity of studies on forensic accounting, this paper adopts a subjective philosophy using a qualitative inquiry. This is achieved by measuring and analyzing data on the perceptions of the development of forensic accounting curricula through non-numerical data. The semi-structured interviews as a data collection method are associated with multiple advantages, including offering detailed data regarding the subject matter, allowing a participant to express and explain opinions, observing non-verbal communication to augment the richness of information, and providing the participant with the necessary privacy and confidentiality to express and explain opinions. However, the semi-structured interview has pitfalls like many other data collection methods. These pitfalls include difficult criteria for recruiting participants, difficulty finding willing participants (due to costs and time), and difficulty analyzing and interpreting the data due to a hidden message (Creswell & Creswell, 2017; Qu & Dumay, 2011; Silverman, 2015).

3.2 Data collection

Primary data was collected through semi-structured interviews. Interviews were conducted with practising forensic accountants and academics responsible for designing or teaching forensic accounting courses at the higher education level. An interactive approach was taken with the interviewees to encourage them to respond openly and honestly. The interactive approach was used as prior studies have demonstrated that it enhances the process of soliciting interviewees' perceptions or interpretative capabilities (Silverman, 2015). Throughout the fieldwork, the recorded interviews were reviewed after each interview to reflect on the initial observations and to plan for the next interview. Nine Australian universities and seven forensic accounting firms provided research access to participants. These universities and firms are considered appropriate cases because they actively participate in forensic accounting education and practice. Eighteen interviews were conducted, equally spread between academics (9 interviews) and practitioners (9 interviews). Interviews with academics were conducted with those with experience teaching forensic accounting courses (six of them have developed forensic accounting degrees and/or units). Interviews with practitioners were conducted with those with senior roles within their organizations (e.g. director or partner) and working in the interconnected areas of forensic accounting. The interviews used semi-structured questions addressing curricula and practice issues.

All 18 interviews were conducted either at the interviewees' offices or by telephone in a one-to-one setting. This method of conducting interviews was recommended by Silverman (2015), who argues that this approach to interview design allows participants to contribute in a manner that would encourage interviewees to share relevant information and respond to complex and exploratory questions. The interviews targeted topics related to the development of forensic accounting curricula, including, for example, content knowledge, integration methods, course materials, and interviewees' experience in teaching and practising forensic accounting. In this study, the average length of each interview was approximately 45 minutes, and the data collection process expanded for six months.

3.3 Sampling Methods

This research used purposive and snowball approaches to sampling (Silverman, 2015). These sampling methods were chosen in anticipation of recruiting individuals who were most likely to be interested in the topic and experts in the subject being studied. The invitations to participate in the interview were initially made by telephone and email. For both groups of interviewees, there was an initial review of the forensic accounting firm websites and the forensic accounting course specifications on the universities' websites. From this analysis, a contact database was established. When the initial interviews were conducted, the participants were asked if they could recommend additional participants to expand the list of potential interviewees further.

The first group of interviewees was forensic accounting practitioners. Participants were assessed as appropriate to represent practitioners' perspectives due to their extensive experience and senior positions. Their particular areas of forensic accounting specialists are provided in table 1. Interviews were conducted across seven forensic accounting firms operating in most Australian states, and these firms were considered the most reputable and largest in this field.

Table 1: Demographic attributes of practitioners

Interviewee Code	Year of experience	Position
P1	Over 20 years	Director
P2	28 years	Partner
P3	20 years	Founding director
P4	Over 20 years	Partner
P5	Over 20 years	Partner
P6	Over 30 years	Partner
P7	Over 30 years	Founding director
P8	Over 45 years	Founding director
P9	Over 13 years	Director

Academics who participated in the interviews represented nine universities across Australia with different academic ranks, as presented in table 2. Six of these academics were responsible for the design of forensic accounting courses.

Table 2: Demographic attributes of educators

Interviewee Code	Year of experience	Academic rank (U.K./Australia based)
A1	35 years	Professor
A2	10 years	Senior Lecturer
A3	15 years	Associate Professor
A4	7 years	Senior Lecturer
A5	7 years	Lecturer
A6	30 years	Senior Lecturer
A7	15 years	Lecturer
A8	10 years	Lecturer
A9	30 years	Professor

3.4 Data analysis

Each interview was recorded, and the recorded interviews were transcribed. This paper uses thematic analysis following the steps suggested by Braun and Clarke (2006). The data has been analyzed using qualitative thematic analysis via the NVIVO 11 software program. The first step in the data analysis was to listen to each interview recording and take extensive notes. The transcripts were checked against the recorded interviews for accuracy. Coding started by performing preliminary jottings. These notes enhanced the researchers' later recollection of the fieldwork inquiry and established ideas for analytical consideration (Braun & Clarke, 2006).

Initial coding was used to identify all important information in the data. Decisions over which elements should be coded were made when it was determined that the coded datum contributed to the construction of the findings or if the coded datum contributed to new insights that may enrich the overall contribution of the study. Once all data was initially coded, a list of the different codes was identified. The next step involved sorting the various codes into potential themes by considering the relationships between codes, subthemes, and themes. This step concluded with themes and sub-themes, where relevant excerpts and datum had been sorted in relation to the theme. In this stage, the researchers were open to all the emerging themes, and no themes were disregarded or abandoned.

The next stage was to refine the devised themes. Themes with little substantive data to support them have been disregarded, other themes have been collapsed together where the data within these themes merge meaningfully, and some themes have been broken down into separate themes when there are identifiable distinctions between their contents. This stage of theme refinement included two levels. The first stage included reading all the collated extracts for each theme to assess whether they formed a coherent pattern. In addition, the themes were reviewed to ascertain if they captured the meaning of the codes. The second level involved developing a satisfactory thematic map to visualize the data and accurately reflect the meanings evident from the data set.

After establishing a satisfactory thematic map and identifying the themes that accurately reflected the meanings in the data, the main aspects of each theme were refined. In addition, this stage included developing a clear definition and name for each theme. This process generated a detailed analysis for each theme, produced an overall story for each theme, checked the overlap between themes, and provided accurate names for the themes. The final stage encompassed the final analysis and write-up of the findings, which reinforced the analysis's

rigour and validity. This stage also included identifying richly descriptive statements from the data set that could be used to illustrate the findings regarding curricula construction.

3.5 Ethical considerations

The research followed ethical codes of conduct in qualitative interviewing. Ethical clearance was obtained through the authors' university. After initial introductions, the researchers ensured that the interviewee carefully read the participant information sheet and signed the consent form. The participant information sheet and the consent form provided information about the research topic, the researchers' contact details, the interviewee's rights, and the purpose for audio recording the interviews. The confidentiality of the interviews was emphasized. The selected respondents were informed that they were free to withdraw their consent at any point during the process.

4. Findings and Discussion

The research findings have been reported and discussed under the following three themes.

The first theme is the interdisciplinary nature of forensic accounting. This theme illustrates how the various components of forensic accounting knowledge could impact the development of forensic accounting curricula.

Second theme: Educators' relevant experience. This theme exemplifies how practitioners and educators perceive the component of forensic accounting knowledge. Consequently, their perception, guided by their previous experience, impacts the development of forensic accounting curricula.

Third theme: Other factors. This theme illustrates how the administrative work of educational institutes, textbooks, and educational accreditations could impact the development of forensic accounting curricula.

These themes have been exemplified by reference to direct quotes from the participants and are elaborated in the following sub-sections.

4.1 Interdisciplinary Nature of Forensic Accounting

According to Kresse (2008), the forensic accounting program of study should include psychology, sociology, criminology, and anthropology as behavioural science components. The academics supported this idea of incorporating knowledge from broader disciplinary fields in the forensic accounting courses:

> *[…] forensic accounting crosses over several disciplines because you need a legal background, accounting knowledge, and psychology helps if you can understand the motivation behind the perpetrator (A7).*

Some academics propose that this knowledge should be encapsulated within core forensic knowledge courses as a module. One participant stated that psychology components would enhance student's comprehension of the behavioural origins of fraudulent behaviour:

> *Many people would never have thought of having a whole lecture in a forensic accounting course on these investigation methods. Right. Whereas that is a psychology course, isn't it? [But] would you have that in psychology? (A1).*

Thus, building an interdisciplinary curriculum is seen as advantageous as it provides the most comprehensive education for forensic accounting students. Moreover, the interdisciplinary is seen as an obstacle to developing forensic accounting curricula. For example, in the case of business valuation, data from the interviews suggested that educators do not perceive business valuation as an essential teaching area. These findings are in line with the findings from previous studies (Cooper & Kawada, 2022; Hegazy et al., 2017; Kramer et al., 2017; Prabowo, 2021; Rezaee & Wang, 2019; Tiwari & Debnath, 2017; J. K. Van Akkeren & Tarr, 2021; Wahyuni-TD et al., 2021). The interviewees believed that teaching this type of knowledge was the responsibility of another department, such as finance:

> *A valuation can be done as part of finance (A5).*

In the case of I.T. forensics, some academics perceived it as an adjunct part and suggested that it be embedded within fraud units. One academic stated.

> *So on the I.T. side, you need to be very careful about providing them with an understanding of fraud-related activities and the use of it might be used for computing (A5).*

For other academics, I.T. knowledge was essential to serve other kinds of forensic accounting duties, for example:

> *They need to understand how data is extremely important for business decision-making as a starting point (A2).*

> *The link between accounting information systems and auditing and forensic accounting – you need to know what that link is (A1).*

Findings on the integration of I.T. forensics are consistent with the results from prior I.T. forensics studies (Alshurafat, Al Shbail, & Almuiet, 2021; Fleming, Pearson, & Riley Jr, 2008; Mehta et al., 2022; Odia & Akpata, 2021; Rezaee & Wang, 2019, 2022).

Therefore, the lack of integration of interdisciplinary knowledge areas was derived from the lack of agreement as to the degree to which forensic accountants may require these services and also reflected disagreement as to the responsibility of offering such knowledge.

In the interviews with the practitioners and academics, both groups noted the diversity of forensic accounting topics. Academics stated that forensic accountants provide a broad range of services, which has led to complexities in combining these speciality areas within one educational program. This is consistent with the findings of Kresse (2008), Kramer et al. (2017), and (Cooper & Kawada, 2022). From a practical perspective, the diverse and dynamic nature of services provided by forensic accountants creates difficulties for educators when designing consistent forensic accounting education programs. Participants within the practitioners' group made various comments on the diversity of the services they provide:

> *[…] everyone thinks, Oh, forensic accounting is very niche, very specialized. It is, but when you go into forensic accounting, you could easily divide forensic accounting training or education into twenty different subspecialties (P3).*
> *It is a multi-disciplinary team, a combination of accounting, technology, investigative, analytical skills, and data that together form the value of the team (P2).*

> *Part of what I did was I did several subjects in law school (P7).*

Practitioners also expressed their appreciation for the diversity of activities within the industry. *Because of the diversity in the matters that I deal with, it is interesting [work] (P1).*

Though the diversity of forensic accounting activities motivates practitioners, they also perceive this diversity as problematic when trying to develop a consistent educational program.

> *[…] because the response to financial crime is not just an accounting response, a holistic picture of the response to financial crime has to bring in much more than just one discipline. It needs to bring in a wide variety. A whole range of professions together help to tackle the problem that is a financial crime, which is endemic in our society (P4).*

These complexities in practice meant that practitioners questioned the practicalities of developing comprehensive forensic accounting educational programs.

> *[…] if someone does their master's in forensic accounting – what have they trained in? I mean, is it insurance fraud? Is it corporate fraud? Is it corporate – expert witness, economic loss damage assessments? Is it personal injuries assessments? Is it a compensation assessment? Is it a land acquisition assessment? […] So, that is the problem (P3).*

Therefore, while academics and practitioners agree on the benefit of forensic accounting education for students in their future work, they are cautious about how it should be tailored and offered. Practitioners articulated a desire for a comprehensive forensic accounting curriculum covering as many forensic accounting topics as possible. However, academics demonstrated a preference for a forensic accounting curriculum oriented to niche topics of forensic accounting.

4.2 Educators' relevant experience

The interviews showed that the participants' relevant experience influenced the development process of forensic accounting as a program of study. Evidence from the interviews showed that academics had tailored their courses in forensic accounting based on their experience or their educational background and cognitive ability. In this regard, different educators' experiences led to divergent perspectives among practitioners and academics and between academics concerning curriculum development and design. Consequently, relevant experience performs a constitutive role in how educators have developed their courses.

> *For me, my background is in I.T., so my interest in how could you detect fraud by people is by the way they behave in the I.T. system (A1).*

Participants were also asked about their perceptions of the existing components of the forensic accounting curricula. This was intended to identify how the relevant experience of individuals shapes their thinking toward teaching in this field. Participants' answers revealed inconsistencies about what they consider valid knowledge within the field. Answers encompassed a range of expectations, for example, "I.T. investigations," "expert witness," "assess the loss or damage," "managers," and "fraud". These findings on forensic accounting skills and knowledge are consistent with the empirical evidence from prior literature (Alshurafat, Beattie, Jones, & Sands, 2019b; Howieson, 2018; Tiwari & Debnath, 2017). Academic views tended to reflect their areas of personal interest:

> *The broad approach I prefer to take as a general rule of thumb is an articulation through a fraud investigation. Thus, for me is the most interesting, relevant, and powerful area (A2).*

Practitioners also demonstrated a tendency to reflect on their relevant experience in developing forensic accounting education. Similarly, they were implicitly aware of the role of relevant experience and the related impact on the delivery of specialized forensic accounting knowledge:

> *A good university would bring someone in from the Information Technology Faculty to teach in this area (P1),*
> *Practitioners may be the only expert in one of them (P9).*
>
> *My experience goes back to my policing days (P8).*
>
> *Some examples are hard to convey without case studies that simulate forensic accounting real work (P6).*

The diversity of forensic accounting practice and the lack of historical legacy in teaching forensic accounting allowed the educators' relevant experience to influence the development process of forensic accounting as a program of study. This may provide some justification for the divergence in views toward the forensic accounting education that Smith and Crumbley (2009) have documented.

4.3 Other factors

Some factors may shape a university curriculum, such as the university timetabling, calendar, and venue arrangements. These factors influence the formation of curricula and are intrinsically related to the administrative work of educational institutes. From the institutional point of view, finding teaching time in the program has been acknowledged:

> *The problem with the undergraduates here is that you have only a limited amount of time (A5).*

An external factor mentioned was a lack of Australian-based textbooks

> *The biggest challenge was a textbook that we have, which is not in line with the Australian information and is not purely used by us (A8).*
>
> *It is not easy to find someone in the industry willing to collaborate in developing course material (A4).*
>
> *Moreover, they are skills that cannot just be theory or textbook (P5).*

Prior research has acknowledged the lack of forensic accounting instructional material in general (Alshurafat, Al Shbail, & Mansour, 2021; Kern & Weber, 2016; Rezaee et al., 2004; Seda & Kramer, 2009). This is supported by the academics in this research, who acknowledge the need to have an Australian textbook and suggest this absence hinders forensic accounting education. However, some participants suggested a solution to the textbook obstacle:

> *you can take an Albrecht textbook out and teach from it in Australia just have to make some modifications for local law and so on. So, we have to give – to pay attention to the legal framework of the country. And we can apply generic principles (A1).*

Another academic sourced material from the internet and collaborated with the industry to provide the students with valid examples.

> *There is a lack of Australian forensic accounting textbooks, so I had to search my resources, which was a bit challenging to begin with, and I had to learn a lot more about the industry than I knew at the time. But that was like 8 or 9 years ago, and so I think at this point, there may be the resources I need, I had, and I rely on the industry a lot to ensure that I am relevant to the industry itself (A9).*

Another factor that has shaped the forensic accounting curriculum is that universities focus on professional and educational accreditations to attract students (Ellington & Williams, 2017). However, there is no Australian accreditation requirement for forensic accounting. Therefore, academics are not encouraged to integrate forensic accounting into their curricula to meet accreditation bodies' requirements. This could be described as a social constraint that determines the process of developing forensic accounting curricula. The data from the interviews with academics suggests that pressure from accreditation bodies often motivates universities to implement programs and courses to legitimize their accounting program. One interviewed academic noted, 'we have to adhere to accreditation requirements' (A5). Other stated:

> *The professional accounting bodies have accreditation requirements. So, the accreditation requirements specifically define what a Bachelor of Commerce should have in it with an accounting major or a master's in professional accounting. It does not mention forensic accounting. […] but there is no accreditation requiring us to teach forensic accounting (A1).*
>
> *[…] Make sure you have strong industry involvement (A3).*
>
> *Many practitioners are involved, so they are sharing the latest practice (A6).*

5. Conclusion

This study explored the factors that influence the development of forensic accounting curricula. The analysis of participant views has revealed different obstacles that hinder the progress in developing forensic accounting curricula.

First, the multi-disciplinary nature of forensic accounting has resulted in forensic accounting being relatively poorly defined as an academic discipline (Botes & Saadeh, 2018). As a result, it has led to ambiguity in the nature and purpose of forensic accounting as a tertiary subject. The findings of this study revealed that forensic accounting academics and practitioners agreed on the importance of integrating multi-disciplinary knowledge into forensic accounting curricula. However, they think that this multi-disciplinary nature of services provided by forensic accountants creates difficulties for educators when designing consistent forensic accounting education programs.

Second, as forensic accounting is a multi-disciplinary field of knowledge, practitioners and academics have interacted with different areas of forensic accounting. This leads to a divergence between their perceptions of what should be taught in the forensic accounting program of study. Third, this study reveals a group of other factors such as administrative work of the educational institutes, lack of knowledge about what forensic accounting entails by students and students find it difficult to imagine where they would work in this field the lack of Australian-based textbooks. In addition, because forensic accounting is a discipline with high social relations, this study has found that the lack of external accreditation requirements

for accounting courses in Australia negatively affects the delivery of forensic accounting education, creating a social constraint.

This research improves the knowledge of what impacts the development of forensic accounting curricula. The findings revealed formative suggestions for educators and university authorities on the factors to be considered when designing a forensic accounting curriculum. At least two options exist to solve the obstacles in the forensic accounting curriculum development process. The first option is acknowledging the diversity in the forensic accounting specialization and discontinuing the general forensic accounting major and postgraduate programs. Encouraging universities, instead, to teach their niche specializations and engage in collaborative educational programs may be an effective way forward. The second option is to develop general forensic accounting curricula. This would require considerable effort, as the instructors must incorporate various knowledge and skills across the program. The program should provide the students with the possibility to build knowledge of the fundamental functions of forensic accounting in the first level "semester or year" and then equip students with the ability to choose from an array of elective courses, which would allow the students to specialize in their chosen area of forensic accounting practice.

A suggestion for schools that do not have the resources, capability, or desire to revamp the curriculum would be to offer a special topics course early in the curriculum or utilize appropriately qualified guest speakers. Students could also be encouraged to tailor their programs using electives. Given that the educators tend to tailor the contents of their forensic accounting curricula accordingly with their personal experiences, we suggest that forensic accounting curricula could be developed to cover core forensic accounting content such as fraud investigation, data analytics, valuation, and legal analysis. This would provide a sound foundation from which a consistent forensic accounting curriculum could be developed.

The participants in this research were volunteers and were not compensated for participating. The fact that these participants chose to participate in the interview process may be influenced by their experiences or their interest in the research topic. Findings in qualitative research are not expected to be generalizable to a broader population. Instead, the study was designed to seek ‘illumination, understanding, and extrapolation to similar situations’ (Golafshani, 2003, 600). This research was limited to the Australian context and based on the perceptions of practitioners and academics. Future research could investigate other stakeholder perceptions (accounting professional bodies, government agencies) using this research as a comparative base.

Moreover, being limited to Australia, future research could extend this research to different regions. In addition, future researchers could examine how to articulate academic curricula with training and professional development. The role of the professional bodies in articulating with academics and universities regarding the curricula design and teaching of forensic accounting could also be a topic for future research.

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