Investigating Enterprise Risk Management Policy in Selected UAE Higher Education Institutions

التحقـــيق في فاعليـة تطبيـــق سياسة إدارة المخـــاطـر التجـــارية في بعـض مؤسسات التعلـــيم العالي بدولـة الإمـارات العربيـــة المتحـدة

by

YASER ABDULRAHMAN IBRAHIM

A thesis submitted in fulfilment

of the requirements for the degree of

DOCTOR OF PHILOSOPHY IN EDUCATION

at

The British University in Dubai

February 2022

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ABSTRACT

Despite its challenging nature, recent educational research has proven that the implementation of enterprise risk management (ERM) in higher education can be successful and effective in many countries around the world. Since the introduction of a risk-based assessment and accreditation system by United Arab Emirates (UAE) higher education licensure and accreditation authorities in 2001 (updated in 2011 and 2019), there have been few academic studies and little research to investigate the effectiveness of ERM implementation in UAE higher education institutions (HEIs). Moreover, even fewer studies have shed light on the major constructs of quality assurance and academic effectiveness in the context of ERM and risk management from the UAE higher education perspective. This research investigates the effectiveness of ERM implementation in HEIs, with specific focus on selected UAE HEIs. The purpose of this study is twofold: to investigate the perceptions surrounding the effectiveness of ERM (as an academic accreditation, assessment and evaluation tool) and its implementation in UAE HEIs, and to propose a set of workable guidelines for UAE HEIs in relation to effective ERM implementation strategies. The Theoretical Framework of this study is built on three major institutional theories: Institutional Organisational Theory, Legitimacy Theory and Organisational Change Theory. These theories were chosen by the researcher based on the premise that they would lead to improved understanding of the research findings by informing the conceptual analysis and deciding the type of literature to rely on. The justification for the choice of each such theory was based on the nature of each of the research questions, as well as the expected outcomes. In this sense, the findings related to the relationship between the factors leading to HEI adoption and the implementation of ERM would be best represented in the concepts of Institutional Organisational Theory, while those findings that touch upon the effectiveness of the ongoing academic processes involved in ERM implementation correspond to the Organisational Change Theory. In terms of methodology, the researcher investigated and examined the major constructs of the study through a sequential mixed-method study design, utilising both quantitative and qualitative research instruments. The participants of the quantitative study were conveniently selected, while the interviews participants for the qualitative study were purposively selected from major HEIs in the UAE. The researcher mainly used a quantitative research tool through a survey questionnaire to obtain data based on the participants' perceptions, and to examine ERM maturity levels across the selected HEIs. The participants of the survey, as well as the interviews, were selected faculty members and academic administrators whose views, professional experience and academic knowledge are indispensable for the process of

academic evaluation and assessment and ensuring quality assurance. The qualitative study was carried out through two phases: first by conducting document analysis, where the themes and data obtained from the document analysis informed the researcher on the current status of risk management and ERM policies' and manuals' applicability and integration into the targeted HEIs' academic processes; while the second phase of the qualitative study consisted of semi-structured interviews conducted with five purposively selected faculty members and administrators with major risk management, quality assurance and academic effectiveness responsibilities. The findings of the quantitative survey answered the major research question regarding the identification of the participants' perceptions of ERM implementation in UAE HEIs and showed that the majority of the participants agreed with the major premise of the study, namely that the effective implementation of ERM leads to proven and sustainable academic effectiveness. The themes elicited from both document analysis and semi-structured interviews highlighted the major characteristics of applied risk management policies and gave hints of what ERM implementation strategies need to be adopted in UAE HEIs in order to best achieve academic effectiveness and meet quality assurance requirements. This study concludes by proposing guidelines and recommendations for optimum ERM implementation strategies that may be adopted in higher education contexts in order to achieve more effective and enhanced ERM integration across all institutional processes. By doing so, this research helps identify the current theoretical and practical features of ERM implementation in UAE HEIs and suggests better strategies for the more effective implementation of ERM. It also paves the way for further study that may consider among other factors the quality and effectiveness of academic programmes and processes in UAE HEIs in terms of ERM adoption and implementation. Therefore, the study resulted in major contributions to literature, theory, methodology and finally policy and practice. In terms of contribution to literature and theory, it helped establish a link between ERM research done internationally and research that can be conducted in UAE higher education context. It has also contributed to the establishment of a theoretical framework that can be used to inform future research in similar areas and in similar contexts. In this way, the study highlights the view that the academia is a unique entity that has a unique purpose and perspective to ERM, different from other organisations' purpose and perspectives of ERM. Contributions to policy and practice are represented by proposing a set of guidelines that aim at refining the ERM implementation strategies in higher education institutions, particularly in the UAE context.

ABSTRACT IN ARABIC

الخـــلاصـــــة

على الرغم من طبيعتها الصعبة فقد أثبتت الأبحاث التعليمية الحديثة أن تنفيذ إدارة المخاطر التجارية أو المؤسسية (***ERM***) في التعليم العالي يمكن أن يكون ناجحــاً وفـاعــلاً في العـديد من البلــدان حــول العــالـم. فمنذ إدخال نظام التقييم والاعتماد القائم على تقييم المخاطر من قبل سلطات الترخيص والاعتماد الأكاديمي الخاص بالتعليم العالي في دولة الإمارات العربية المتحدة في عام 2001 (ولاحقاً للتحديثات الطارئة في عامي 2011 و2019) لم يلاحظ وجود إلا القليل من الدراسات الأكاديمية والأبحاث القليلة الخاصة بالتحقيق في فاعلية تنفيذ إدارة المخاطر المؤسسية في مؤسسات التعليم العالي في دولة الإمارات العربية المتحدة. علاوةً على ذلك فالقليل من الدراسات قد سلطت الضوء على المفاهيم الرئيسية المتمثلة بضمان الجودة والفاعلية الأكاديمية في سياق إدارة المخاطر المؤسسية وإدارة المخاطر من منظور التعليم العالي في دولة الإمارات العربية المتحدة. يبحث هذا البحث في فعالية تنفيذ إدارة المخاطر المؤسسية في مؤسسات التعليم العالي مع التركيز بشكل خاص على مؤسسات التعليم العالي المختارة في الإمارات العربية المتحدة. الغرض من هذه الدراسة يقع في شقين: أولاً التحقيق في التصورات المحيطة بفاعلية إدارة المخاطر المؤسسية (كأداة للاعتماد والتقييم الأكاديميين) وتنفيذها في مؤسسات التعليم العالي في الإمارات العربية المتحدة وثانياً اقتراح مجموعة من المبادئ التوجيهية العملية لمؤسسات التعليم العالي في دولة الإمارات العربية المتحدة فيما يتعلق بفعالية. استراتيجيات تنفيذ إدارة المخاطر المؤسسية. تم بناء الإطار النظري لهذه الدراسة على أساس ثلاث نظريات مؤسسية رئيسية: النظرية التنظيمية المؤسسية، ونظرية الشــرعية المؤسساتية، ونظرية التغيير التنظيمي. تم اختيار هذه النظريات من قبل الباحث بناءً على فرضية أنها ستؤدي إلى تحسين فهم نتائج البحث من خلال إعلام التحليل القائم على المفاهيم وتحديد نوع المراجع والأبحاث السابقة التي يجــب الاعتمــاد عليها. استند تبرير اختيـار كل نظرية من هذه النظريات إلى طبيعة كل سؤال من أسئلة البحث وكذلك النتائج المتوقعة. وبهذا السياق فإن النتائج المتعلقة بالعلاقة بين العوامل المؤدية إلى تبني مؤسسة التعليم العالي وتنفيذ إدارة المخاطر المؤسسية ستكون ممثلة بشكل أفضل في مفاهيم النظرية التنظيمية المؤسسية، في حين أن تلك النتائج التي تمس فاعلية العمليات الأكاديمية الجارية التي تنطوي عليها تنفيذ سياسة إدارة المخاطر المؤسسية تتوافق مع نظرية التغيير التنظيمي. من حيث منهجية البحث المتبعة قام الباحث بالتحقيق المفاهيم الرئيسية للدراسة واختبارها من خلال تصميم دراسة متسلسلة وتتبع الطريقة المندمجة الأسلوب، باستخدام أدوات البحث الكمية والنوعية معاً. تم اختيار المشاركين في الدراسة الكمية بناء على الأسلوب الملائم لاختيار العينات بينما تم اختيار المشاركين في المقابلات في الدراسة النوعية من مؤسسات التعليم العالي الرئيسية في الإمارات العربية المتحدة بالاعتماد على نهج الاختيار القصدي. استخدم الباحث بشكل أساسي أداة البحث الكمي من خلال أسئلة الاستبيان للحصول على البيانات بناءً على تصورات المشاركين، واختبار مستويات نضج ومدى تطبيق إدارة المخاطر المؤسسية في مؤسسات التعليم العالي المختارة. تم اختيار المشاركين في الاستبيان وكذلك المقابلات من أعضاء هيئة التدريس والإداريين الأكاديميين الذين لا غنى عن آرائهم وخبراتهم المهنية ومعرفتهم الأكاديمية في عملية التقييم الأكاديمي وضمان الجودة. أُجريت الدراسة النوعية على مرحلتين: الأولى من خلال إجراء تحليل الوثائق المتوفرة حيث ساعدت الموضوعات والبيانات التي تم الحصول عليها من تحليل الوثائق الباحث في إطلاع الباحث على الوضع الحالي لمدى تطبيق إدارة المخاطر وسياسات إدارة المخاطر المؤسسية وقابلية تطبيق هذه السياسات ومكاملتها ضمن العمليات الأكاديمية في مؤسسات التعليم العالي المستهدفة. بينما قامت المرحلة الثانية من الدراسة النوعية على إجراء مقابلات شبه منظمة مع خمسة أعضاء هيئة تدريس وإداريين تم اختيارهم بالاعتماد على الاختيار القصــدي مع مسؤوليات إدارة المخاطر وضمان الجودة والفعالية الأكاديمية. أتت نتائج الاستبيان الكمي لتجيب على السؤال البحثي الرئيسي المتعلق بتحديد تصورات

المشاركين حول تنفيذ إدارة المخاطر المؤسسية في مؤسسات التعليم العالي في دولة الإمارات العربية المتحدة، وقد أظهرت اتفاق غالبية المشاركين مع الفرضية الرئيسية للدراسة وهي العلاقة الحتمية بين التنفيذ الفاعل لسياسة إدارة المخاطر المؤسسية وتحقيق الفاعلية الأكاديمية المستدامة. أبرزت الموضوعات والنتائج المستخلصة من تحليل الوثائق والمقابلات شبه المنظمة الخصائص الرئيسية لسياسات إدارة المخاطر المطبقة وقدمت تلميحات وإرشادات حول استراتيجيات تنفيذ إدارة المخاطر المؤسسية التي يجب اعتمادها في مؤسسات التعليم العالي في الإمارات العربية المتحدة من أجل تحقيق الفاعلية الأكاديمية بشكل أفضل وتلبية متطلبات ضمان الجودة. تُختتم هذه الدراسة باقتراح الباحث لمبادئ توجيهية وتوصيات لاستراتيجيات تنفيذ إدارة المخاطر المؤسسية المثلى والتي يمكن اعتمادها في سياقات منظومة التعليم العالي من أجل تحقيق تكامل أكثر فاعلية وأكثر تعزيزاً لإدارة المخاطر المؤسسية عبر جميع العمليات المؤسسية. من خلال القيام بذلك ساعد هذا البحث في تحديد السمات النظرية والعملية الحالية لتنفيذ إدارة المخاطر المؤسسية في مؤسسات التعليم العالي في دولة الإمارات العربية المتحدة واقتراح استراتيجيات أفضل لتنفيذ أكثر فاعلية لسياسات إدارة المخاطر المؤسسية. كما أنه مهد الطريق لمزيد من الدراسات التي قد تراعي من بين عوامل أخرى جودة وفاعلية البرامج والعمليات الأكاديمية في مؤسسات التعليم العالي في الإمارات العربية المتحدة من حيث اعتماد وتنفيذ إدارة المخاطر المؤسسية. لذلك أسفرت الدراسة عن مساهمات كبيرة في المخزون البحثي السابق والنظريات، والمنهجيات، وأخيراً في السياسات والممارسات. من حيث المساهمة في المخزون البحثي والنظري السابق فقد ساعد البحث في إنشاء رابط بين أبحاث إدارة المخاطر المؤسسية التي يتم إجراؤها دولياً والأبحاث التي يمكن إجراؤها في سياق التعليم العالي في الإمارات العربية المتحدة. وقد ساهم أيضاً في إنشاء إطار نظري يمكن الاعتماد عليه لإرشاد البحث المستقبلي في مجالات وسياقات مماثلة. وبهذه الطريقة سلطت الدراسة الضوء على وجهة النظر القائلة بأن الأوساط الأكاديمية هي كيان فريد وذات هدف ومنظور فريدين لإدارة المخاطر المؤسسية يختلف عما تسعى إليه المنظمات الأخرى فيما يتعلق بإدارة المخاطر المؤسسية. وأخيراً تتمثل مساهمات البحث في السياسات والممارسات من خلال اقتراح مجموعة من الإرشادات التي تهدف إلى تحسين استراتيجيات تنفيذ إدارة المخاطر المؤسسية في مؤسسات التعليم العالي، ولا سيما ضمن دولة الإمارات العربية المتحدة.

DEDICATION

I dedicate this thesis to every student in Syria who pursued their dream to continue their education, where the disruption from the monstrous civil conflict has shattered their plans and rendered these distant dreams for the present.

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First, eternal and endless gratitude must be expressed to my supervisor, Prof. Abdulai Abukari. Without his valuable and much needed guidance and feedback, as well as patience and understanding, this thesis would not have been completed. Prof. Abdulai enlightened me throughout the whole thesis writing journey with highly professional and in-depth academic guidance. Appreciation is also due to the faculty members and administrators who participated as essential and constructive subjects in this study.

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My biggest gratitude goes to my loving and all caring parents, without their priceless care and wholehearted prayers I would never have been able to reach this important station of my life. Last but not least, my appreciation must go to my patient, hardworking, and dedicated beloved wife. She is to be deeply thanked for all her indescribable patience, love, passion and support, as well as for her overwhelming care at all times. Without her patience and support, I would definitely never have continued this challenging journey and reached to a safe and pleasing end.

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LIST OF DEFINITIONS, ACRONYMS & ABBREVIATIONS

Terminology	*Definition*
Academics	When used "academics" will mean both academic administrators and faculty members, or shareholders.
ADEK	Abu Dhabi Department of Education & Knowledge
Administrator	As used in this study, an administrator is an academic staff member whose task is to administer and implement college policies and administer processes with particular attention applied to risk management and enterprise risk management.
CAA	UAE Commission for Academic Accreditation
CIMA	The Chartered Institute of Management Accountants
Corporate Governance	The set of regulations and practices adopted by an HEI board of directors or trustees to guarantee their accountability, performance, and quality assurance.
COSO	The *Committee of Sponsoring Organizations of the Treadway Commission*: a joint initiative of five private sector organisations, dedicated to providing thought leadership through the development of frameworks and guidance on enterprise risk management, internal control and fraud deterrence.
CRO	Chief Risk Officer
DOS	Doctor Of Study
End-Users	Educational leaders and risk management practitioners, within the higher education institutions context.
ERM	*Enterprise Risk Management*, as further defined in the Conceptual Analysis section in Chapter Two.
Faculty Member	A faculty teacher or instructor, but not a teaching assistant, whose task is to administer and impart education to the students in a college, through lecturing and other means of interaction and communication.
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institution
Instructors	The faculty or teaching staff, teachers and lecturers, regardless of their post-graduate qualification (e.g., MSc., PhD, Professional Doctorate), or as used synonymously with "Faculty Member".
IPs	Interview Participants
ISO 31000	*ISO 31000:2018, Risk management – Guidelines*, which provides the principles, framework and process for managing risks.
KHDA	Knowledge & Human Development Authority
MoE	UAE Ministry of Education
QA	Quality Assurance
QAA	The UK's *Quality Assurance Agency* for higher education
Risk Appetite	The level of risk that an academic (or other) institution is prepared to accept, before action is deemed necessary to reduce it.
Risk Maturity	A measurement tool adopted by an organisation to help them better understand their overall risk position or status, including the value created from risk management initiatives.

RMM	The *Risk Maturity Model* is a model that identifies key attributes for successful and effective risk management implementation.
RQ	Research Question
SIL	Standards for Institutional Licensure
SPA	Standards for Program Accreditation
SPSS	Statistical Package for the Social Sciences
SRM	Strategic Risk Management
TBD	To be determined or defined
UAE	United Arab Emirates
UK	United Kingdom
URMIA	*The University Risk Management and Insurance Association*, an international non-profit educational association serving colleges and universities.
USA	United States of America

CHAPTER ONE: INTRODUCTION

1.1 Background Information

The subject of 'risk management', used throughout the study as "enterprise risk management (ERM)", in higher education is one of the most live subjects and in fact, the most important in recent times due to the strive of many higher education institutions across the globe to quality assure their practice. However, in order to introduce the concept of ERM and discuss its importance and significance in higher education policy and policy making contexts, it is important to introduce its overarching defining concept of quality assurance. As concluded by the literature within the UAE context, quality is a concern in UAE higher education, where a successful model of risk management policy is absent (Mansour 2009; Warner and Burton 2017; Gallagher 2021).

Over the past two decades of the 21st century, several current trends have identified the essence and significance of quality assurance (QA) across a wide spectrum of the human endeavour. Quality is "a relative concept in that it means different things to different people in different contexts and in relation to different purposes" (Harvey, Burrows & Green 1992, p. 3). Through defining QA, Martin (2018, p. 61) specified the "role of quality assurance" as "precisely to develop a set of criteria which describe attributes of quality and therefore a so-called *quality model*". On the question of what quality would mean in the context of higher education, Abukari and David (2019, p. 305) concluded that "Quality assurance (QA) has remained an issue and an important element in higher education (HE) practice since the 1990s … QA still attracts the most scrutiny and monitoring by major stakeholders and interest groups in the industry". Discussions on how HEIs and QA agencies are responding to new challenges, such as the learning outcomes, academic effectiveness, and success, have all been the subject of some important research over the past two decades (Clarke & Lunt 2014). These discussions were also the major pillar of the third event of the European Quality Assurance Forum hosted by Corvinus University of Budapest in 2008 (Bollaert et al. 2008, p. 4). The landmark 2008 Forum also highlighted the importance of and need for the "examination of the [positive or negative] impact that rankings have on quality levels and their unintended consequences" (Ibid., p. 4).

Relevant to the subject of QA, risk, risk management, ERM, quality, QA, academic effectiveness, and performance are all used as major conceptual parameters of the study. It is agreed among researchers in the field that these are familiar and common terms to the enterprise business world (Perera et al. 2020; Anton and Nucu 2020). However, their introduction to and integration in the academic arena seem to be a fresh trend that is strategic, important, and rewarding (University Risk Management and Insurance

Association [URMIA] 2007, 2016, 2018; Gallagher 2009; Roach, DeSouza & Kaufman 2010; Abraham 2013; Lundquist 2013, 2015; Deck 2015). These studies and many others have defended the notion that ERM would best serve the purpose of achieving quality in academic performance, as well as ensuring meaningful learning for future generations. The introduction of ERM into higher education has been strategic and rewarding in the sense that its primary focus has always been on quality processes that ultimately lead to the effectiveness of the academic process, and therefore student learning. The only major issues of their introduction to the higher education arena are related to their capability of adaptation and means of implementation, as the major research question of this study will explore. The systematic guidelines of integrated management systems as set by the Committee of Sponsoring Organizations of the Treadway Commission ([COSO], 2017) and ISO 31000: 2018, among other similar systemic and systematic sets of guidelines, will guarantee a good internal control resource to make better plans and more value-added decision-making, which will protect the value, and hence quality, they seek to establish in their organisation (Hillson 2019).

The spread of the COVID-19 virus as a pandemic late in November 2019 changed the way the whole of humanity has been approaching risk and risk management. To address that high-scale risk, the Ministry of Education (MoE) in the UAE made several decisions to cope with the rising risk and avail of potential opportunities. This sent a strong message to the educational stakeholders in the country to re-consider risk management across all educational institutions (Grant Thornton 2020). At the time that this study was conducted and drafted, there was found to be a relatively large number of books and research studies being, or have been, written on the subject (Lundquist 2013, 2015; Agustina & Baroroh 2016; Hillson 2016, 2017, 2019; Becher 2019), as well as initiatives and workshops being conducted (e.g. the North Carolina State University's academic and highly professional 1–5 day "*ERM in Higher Education Workshop*" held in November 2019; as well as ISO, COSO and Deloitte updates and workshops periodically posted on their websites). This makes it a vibrant and interesting topic to investigate, despite being challenging and hard to keep abreast of. Given the broad and vast dimensional nature of this subject, this study tries to focus on the application and implementation of ERM in UAE HEIs for institutional accreditation and licensure purposes, and the benefits it may offer to academic performance and quality, while eliminating all other irrelevant dimensions and factors.

Academic institutions (colleges, institutes, and universities) have always identified themselves as unique entities, substantially isolated, heterogeneous, and different from other for-profit and non-profit business organisations (Stephens & Graham 2010; Lundquist 2013; Radnor & Osborne 2013; Deck 2015; Hoover

& Harder 2015; Farquharson, Sinha & Clarke 2018; Pickernell *et. al* 2019). By the same token, the world outside academia has always treated them as such. According to Birnbaum (1988) and Lundquist (2015), the unique aspects that distinguish HEIs from all other institutional bodies outside of academia include among other factors their three-fold mission of "teaching, research and service" which makes them institutions driven by goal ambiguity, and their decentralized decision-making. No other organisation outside the academia would combine these three mission driven components in their corporate governance or organisational structure. However, in recent times academic institutions have not been ideally isolated from the business world. Accordingly, there has been increased demands for such entities to identify themselves as safe, secure, and profitable organisations, in addition to being pedagogically professional, contributing, and competent (Warner & Burton 2017). In this sense, colleges and universities currently find themselves under the same pressure of identifying risks as those in the private sector or business world. Examples from the international, regional, and local higher education context can be found to sustain this notion of reliance on risk identification. In the UAE, the Commission for Academic Accreditation ([CAA], 2019a, 2019b) stressed the importance of a risk-based model of accreditation and assessment for universities' acknowledgment and ranking. Internationally, for that ultimate purpose of achieving quality, "the Quality Assurance Agency (QAA) in the UK considers maintaining high quality across all aspects of HE as essential to ensure that it continually reflects the needs of society" (Abukari & David 2019, p. 305). For that ultimate purpose of achieving quality, the United Kingdom (UK) QAA "supports the implementation of a proportionate, risk-based approach to quality assessment". According to the same policy, "this is the right approach for a mature higher education sector" (QAA 2017a, p. 1).

It is agreed almost exclusively that higher education is the key to advancement in all countries, and the ultimate resource of well-being for all nations (Warner & Burton 2017). Higher education is by all means vital for human capital development through its driving forces leading to a diversified knowledge-based economy. Theeranattapong, Pickernell and Simms (2021) argued in favour of the crucial importance of universities as major contributors to the economy development through science advancements and innovation. According to them, "Universities' traditional roles, of teaching and research, are increasingly being supplemented by government policies aimed at increasing the "entrepreneurial" activities as a way to help develop the economy". According to the Higher Education Funding Council for England ([HEFCE], 2001), the UK was one of the earliest countries in the world to realise the importance of preparing students in HEIs to enter the world of work. This is not a common approach in the UK alone however, since countries such as China, Finland and Singapore have long

adopted this policy guideline to enhance and boost their economic competitiveness. In the UAE, higher education is significantly important to the development of the country for the reason that both the work market and research-based forces come to play together (Gallagher 2021; Warner & Burton 2017). Regarding the market-related forces, the most obvious advancement is the substantial increase in private schooling and academic institutions, and the increasing demand to fulfil the market needs with professionals and experts of all specialties. The same would apply to the research-based sector and its increasing demands for professional expertise and workforce. Higher education plays the inevitable role of leading and pioneering intellectual trends, nourishing new knowledge, and exploring new and vital life projects (HEFCE 2001; Warner & Burton 2017; CAA 2019a). It is a crucial factor for the transformation of innovation leading to successful and practical business, industry and community.

On the other hand, HEIs in general are found to be far behind commercial businesses and industries in developing and implementing practical and sustainable ERM since HEIs need the real motivation to do so, contrary to that which drives financial institutions or private businesses. The main reason would be that "universities are heterogeneous institutions varying in objectives and strategic priorities with regards to the types of partners they engage with" (Pickernell *et. al* 2019, p. 3) HEIs do not find themselves in need of financial survivability in the same way that other financial businesses do. In other words, HEIs lack a real motive to apply and sustain ERM, which would obviously and mainly be financial. Lindquist (2013, p. 147) concluded that HEIs "do not have a fully integrated institution-wide framework in place". She further concluded that since "evidence regarding various aspects of ERM is limited to the trade press and industry surveys, and there is little academic literature on this topic" (Ibid., p. 148), such lacking research is needed to evidence the extent that ERM is required in higher education, which can bring about "financial and strategic benefits" to the HEIs' stakeholders. Tufano (2011) and Vandenberg (2017) agreed with Lundquist (2013) in that HEIs are different from financial entities in terms of lacking the real financial or otherwise motive to implement ERM on board their organisational structures. "Higher education lags behind other sectors in ERM adoption and maturity (AGB, 2009, 2014; Gurevitz, 2009; Tufano, 2011)" (Lundquist 2015, p. 5). Vandenberg (2017) stated:

> it is no secret that the threats facing HEIs are rising in frequency and complexity. You likely have your own list in mind – those scenarios that keep you awake at night thinking about the potential impact on your institution. But restlessness won't lessen those risks. Nor will it ensure that leadership has a shared understanding of and playbook for mitigating them.

The presence of successful ERM helps provide more detailed information about the risks, which will result in better management, more informed management, and improved decision-making (Deck 2015).

Therefore, because quality in general in the academic context poses itself as a highly strategic component of the academic and learning process, the tools to identify, quantify and qualify quality define themselves as indispensable controls for a successful academic process. In this sense, by applying a risk management model such as ERM, academic institutions can confidently achieve their sought quality objectives and thus cope with a challenging business market and increased public focus on business and management practices, especially at their senior leadership level, whereby control tools need to be in place, such as a healthy management system achieved through a proven and authoritarian ERM model. As will be discussed in the Literature Review chapter of this study, Lundquist (2015, p. 149) concluded that "the culture of higher education is unique, making the introduction of the more corporate aspects of ERM into the decentralized, shared governance structure of IHEs [Institutes of Higher Education] problematic". According to her, the factors that makes HEIs unique (three-fold mission with goal ambiguity, decentralised decision making and shared governance) are the same factors that shape the academic culture that resists organisational changes such as ERM adoption and implementation. As argued and concluded by Mansour (2009), HEIs tend to inherently resist the introduction of any business-like model to their QA system. In the UAE context, Mansour (2009, p. 4) posited that there is a list of cultural factors in the traditional educational environment that make HEIs and other schooling settings revolt against the "introduction of business quality concepts". These factors would include:

> the rejection of industrial model vocabulary and an anti-management tendency; a tradition of individualistic rather than collectivist responsibility for quality; a traditional belief that performance achievement is the product of inputs; the organizational context of the school but not the classroom can be a focus for TQM; and a tradition of management by centralized decision making (Mansour 2009, p. 4).

Lundquist (2013, p. 145) stated that "during the first decade of the 21st century, ERM has become identified as a best management practice for organisations of all types, including for-profit financial and non-financial organisations, non-profits, universities and government organisations". Conversely, in their extensive study on ERM, Liebenberg and Hoyt (2003, p.13) explained that "the traditional risk management approach has been characterized as a highly disaggregated method of managing firm risks". Lermack (2008) and Hillson (2019) explained traditional risk management, as opposed to ERM, where risks are identified, responded to and handled on an ad hoc basis only once identified.

Based on a review of the ERM literature, it has been evident in recent research on ERM that relevant frameworks of risk management need to be proposed and tailored specifically for academic institutions. Justifiably enough, in this context, the creation and implementation of best performance practices in higher education would be ideally supported by the adoption of optimum higher education risk management practices that are internationally accepted and tested. ERM research in the UAE, as detailed

in the Literature Review chapter, shows that such practices exist in UAE HEIs, with CAA risk-based accreditation and assessment tools as an example, but they are still undergoing development and refinement (Gallagher 2021; Warner & Burton 2017). These practices should focus on the enhancement of academic achievements in the higher education sector and seek more powerful motivational drives to enhance their corporate performance. This will therefore guarantee a better teaching and learning environment of quality, positively impacting higher education students and researchers in the UAE. Similarly, it has been widely noted in the UAE higher education context that the absence of good management, or as defined hereinafter as good *governance*, would lead to negative consequences "such as vulnerability and poor performance of the whole teaching and learning process", as described by the Financial Reporting Council's ([FRC], 2008, p. 1) Combined Code on Corporate Governance.

Reflecting on initiatives in UAE higher education and how they contribute to better and more solid evaluation and assessment of academic organisational performance would sustain the notion that quality has long been a top priority in UAE higher education (Mansour 2009; Salem 2014; Warner & Burton 2017; Gallagher 2021)). The unification of the Ministry of Higher Education and the MoE was officially announced by the UAE government in January 2016 as a step forward towards the achievement of quality higher education in the UAE. This merger was important to the quality of education in the UAE in the sense that it helped diminish the boundaries of the learning curve transition from one level to another in a smooth and seamless manner. It was a merger of "thinking and culture" between the two levels of education that promoted a greater cooperation between the two different schooling environments, as stated and intended by the educational leadership and authorities at the time. Adopting the same thinking when this unified system was created helped the student move from one level of learning to another while staying within the same culture. Warner and Burton (2017, p. 24) also concluded that:

> the unified Ministry of Education is better able to focus on aligning educational policies with present and future needs among the various sectors in the UAE, in order to achieve the vision of being a knowledge-based economy. It is felt that this unification will also bring greater accountability to those in charge of each division within the ministry.

Another ground-breaking initiative by the UAE's MoE came in 2017, when the Ministry outlined a "new strategic plan to develop an innovative Education System for a knowledge and global competitive society, that includes all age groups to meet future labor market demand, by ensuring quality of the ministry of education outputs, and provision of best services for internal and external customers" (Warner & Burton 2017, p. 44). According to Warner and Burton (2017), this was not surprising "because in the UAE National brain-storming session that was held in 2013, customer ranking of public education was 3.55 on a 1 to 5 scale, the lowest among public sector entities", as seen in Figure 1.1, while the UAE's

international ranking of the sector on the World Economic Forum Global Competitiveness Report was 49 (Warner & Burton 2017, p. 24).

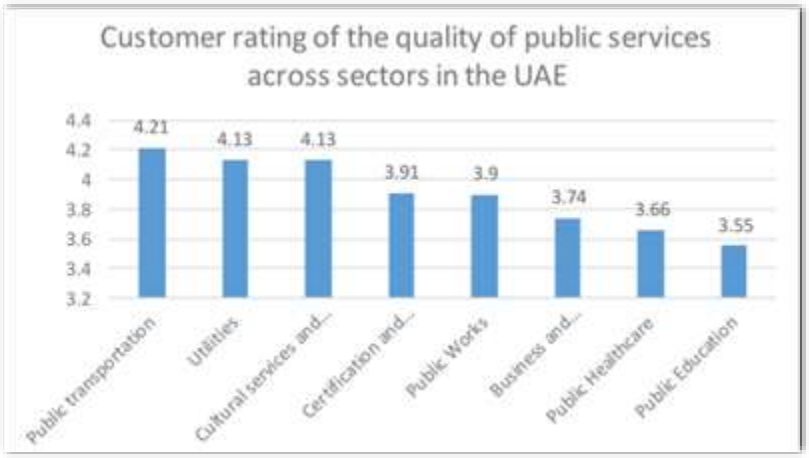


Figure 1.1 – Quality of public service across different sectors in the UAE – Adopted from Warner and Burton (2017, p. 24)

That is to say, as mentioned earlier, the achievement of academic institutional effectiveness as well as academic performance quality among faculty members and administrators is a priority in UAE HEIs. For this reason, defining the topic of this study within the context of UAE research is necessary.

1.2 The UAE Research Context

Driven by the unique parameters of cultural coherence and heritage in the UAE, attention was placed from the early days of UAE unification in 1970 on education, and more particularly higher education (Warner & Burton 2017; Gallagher 2021). Several factors make the UAE context interesting for the subject of ERM implementation in higher education. Mansour (2009), Warner & Burton (2017), the CAA (2019a & b) and Gallagher (2021) argued that the UAE higher education context is unique in the sense that its system of public vs. private universities is different from other countries in so many ways: public vs. private universities' approach to curriculum, ranking and accreditation criteria, method of teaching and assessment, as well as government funding support and oversight. Another factor that distinguishes the UAE higher education context is the hugely hybrid mixture of nationalities enrolled on camasses. There is also the need to preserve local traditional values as reflected in curriculums against the new wave of international ethical and cultural values imposed by the influx of international students. These factors have always emphasized the need for policy refinement and policy reform on all educational levels (Warner and Burton 2017).

For these and other reasons, focus was placed on the 2021 National Agenda in the UAE, with the enhancement and sustainment of education being among the top priorities. Warner and Burton (2017, p. 28) stated that any research on UAE education needs to take into consideration observations made by "the educational leaders about the reforms and the purpose of education". The UAE educational authorities launched the UAE 2030 National Higher Education Strategy (the National Strategy), a visionary plan launched by the UAE's MoE in September 2017 that aims at achieving education excellence, among other things. The National Strategy came to further support the 2021 National Agenda, aimed at building "a more diverse economy that relies less on oil" (CAA 2019a, p. 8). There came the need for a more robust, broader, yet more flexible higher education system in the UAE that endeavoured to boost higher education as a major sector leading the community. In this sense, focus was placed on the quality of education provided to students within this knowledge-based economy, to borrow the CAA's 2019 *Standards* terms. Through the 2021 National Agenda, the UAE identified four main pillars for educational reform: "to improve students' experience and attainment at all levels; to improve the quality and professionalism among educators; to ensure higher standards at an international level; and to ensure greater accountability within the education sector" (Warner & Burton 2017, p. 10).

In order to ensure that high levels of quality are met in colleges and universities, several initiatives and processes have been adopted by the UAE's MoE to refine the existing standards and procedures of both new and existing academic institutions. Reforming the educational system was the first and foremost initiative, taking into consideration the argument in the UAE context between the traditional and the new. Recent educational research, policies and studies in the UAE show that the reforms as intended and executed by educational leaders in the UAE have indeed started to cope with the universal trends of focusing on the human capital development factor. The UAE Vision 2021 clearly manifests this significant move in education towards human capital development. The human factor has started to become the major focus towards the achievement of a "diversified knowledge-based economy" (Warner & Burton 2017, p. 28). Therefore, in order to ensure that high levels of faculty members and instructors' quality performance are met in colleges and universities, several initiatives, policy reforms and processes have been adopted by the UAE's MoE, and many others yet to be adopted, to refine the existing standards and procedures of both fresh and long-existing academic institutions.

In its attempt to achieve best quality knowledge for the UAE generations, the UAE government has taken the development of higher education and the issue of quality in higher education very seriously through considering many initiatives. One of the most important initiatives to note here, for example, is the

formation by the UAE's MoE of the CAA. In this sense, in order to discuss risk management and its implementation in the context of UAE HEIs and related research, reference must be made throughout the study to the CAA (2019a, 2019b). Reference is also made in the Literature Review chapter to the National Standards (or the *Standards*) set by the CAA as the first UAE formalised standards for HEIs' licensure and accreditation. The study then comes in line with the UAE National Strategy for Higher Education 2030. On its website, the CAA states:

> it is generally conceived and understood that all colleges and universities in the United Arab Emirates, whether supported by the government or private, thrive to sustain the huge potential for a future based on quality knowledge. It is therefore very important that academic institutions in the UAE "offer the highest quality programs, programs that are recognized both within the country and internationally for their excellence.

Warner and Burton (2017, p. 29) concluded that this inclination to educational policy reforms came as a need and fate:

> There are still bastions of tradition routed in the current paradigm of UAE education policy. As well as the market-oriented approach, conservative elements of education ideology can also be perceived in relation to the reforms. This is to be expected as the UAE seeks to pass on cultural and traditional values to the youth. The tension between traditional values and the new wave of change must be delicately balanced.

In their extensive study on traditional risk management, Marsh Risk Consulting (2012) defined the risk management process as seen in Figure 1.2 below.

Figure 1.2 – The Risk Management Process – Adopted from Marsh Risk Consulting (2012)

The creation and implementation of best leadership practices in higher education would also be best supported by the adoption of best higher education models that are internationally accepted and tested. These practices focus on the enhancement of performance in the higher education sector. This will therefore guarantee a better-quality environment for the teaching and learning process impacting students and researchers in the UAE. It has been widely noted in the UAE higher education context that the

absence of good management would cause negative consequences "such as vulnerability and poor performance of the whole teaching and learning process" (FRC 2008, p. 1).

That is to say, quality is a concern in UAE higher education, where a successful model of risk management is absent. For that reason, the implementation of ERM in UAE HEIs has always been simultaneously significant and challenging. Its presence helps provide more detailed information about the risks, and this will result in better management, more informed management, and better decision-making (Deck 2015).

1.3 Significance of the Study

This study takes its significance from the following three points. *First,* it derives its importance from the rising importance of the risk management subject over the past few years in HEIs internationally in relation to their system, good governance and effective implementation of risk management practices that research, as the literature review of this study shows, leads to the effectiveness of their academic and organisational processes. *Second,* based on the main aim of this study, it deals with the perceptions obtained from academic administrators and faculty members on the effectiveness of ERM implementation, a research factor that has not been investigated by ERM researchers in the higher education context. ERM research dealing with academic administrators' and faculty members' perceptions on the implementation of ERM is indeed lacking. As is discussed further in the conceptual framework analysis of this study, the perceptions of academic administrators in charge of the effectiveness and QA of academic processes are essential in determining the process and decision-making of ERM implementation, since those perceptions shape and determine the decision-making process of ERM adoption and implementation. *Third,* and relevant to the main purpose of this study, it is an attempt to conceptualise and suggest an enhanced risk-based accreditation framework that includes guidelines directly touching on the academic process at large, with focus on the faculty members and instructors in UAE HEIs. Therefore, through this study the researcher proposes recommendations for a solid risk management framework or model that can be implemented in other UAE HEIs to touch upon issues of academic organisational and institutional performance, QA and other related objectives such as accreditation and evaluation, using a quantitative research method supported by minor qualitative research tools. This study therefore also takes its significance from that fact that is an attempt to investigate the implementation of ERM practices within the environment of UAE HEIs in a research-based context, and based on lessons learned from this research, it proposes an enhanced and more effective model of ERM to play a more productive role in the academic process in the UAE at large.

1.4 Research Problem Statement

As agreed among risk management researchers and practitioners, although in theory ERM appears to be a succinct and effective risk management model, in practice, as is the case with most managerial techniques, the devil is in the implementation. However, the researcher decided to stay away from the devil of those details in order to clearly define the research problem and to narrow down the main constructs of the study to its major topic and end-users. In this way, and as stated by Van de Ven (2007), putting a study within the perspective of its topic and end-users, in the researcher's case risk management as perceived by the academic risk management practitioners and administrators, as well as the faculty members or instructors, would make it easy to define the specific research problem and analyse its dimensions.

It is conceived from reviewing the literature that research relating to the adoption, implementation, and integration of ERM in HEIs would only focus on problems inherent in the unique and distant organisational environment of HEIs themselves, as well as the nature of ERM (Mikes & Kaplan 2014; Deck 2015; Lundquist 2015; Hillson 2019). By placing the study within the parameters of its topic, UAE context and end-users, as stated earlier, there seems to be other areas to investigate while examining ERM research in the context of higher education. Some of these ERM-related issues in HEIs that are still problematic, as evidenced by recent research and which are worth investigating would touch on risk-related areas of academic institutional accreditation, assessment, and evaluation, as well as the ERM implementation process itself. Others would relate to ERM implementation decision-making and its relation to the effectiveness and QA of the academic process, being the focus concept of this study. Additionally, despite undisputed evidence of risk management or ERM's actual application and implementation in HEIs, including major UAE HEIs, there is evidence that the effectiveness of ERM implementation has been extensively empirically studied and researched in the context of business and financial corporations, but not so in higher education or the educational context in general. Examples of these studies are numerous and hard to exhaustively list in this study (e.g., Hillson 2003, 2016, 2019; Blaskovich & Taylor 2011; Deloitte 2011, 2013, 2015; Risk Management Society [RIMS], 2011, 2013, 2015; Beasley, Branson & Hancock 2012; PriceWaterhouseCoopers [PwC] 2017 and 2021).

However, according to Lundquist (2013, 2015), Deck (2015), Centko (2017) and Vandenberg (2017), even though ERM in the higher education context has started to be presented as a major topic of some academic research over the early decades of the 21st century (e.g. Beasley, Branson & Hancock 2005, 2010, 2012; Mikes 2005, 2009; McShane, Nair & Rusturnbekov 2011; Lundquist 2013, 2015; Deck

2015), there is still little systematic empirical academic literature on the topic that researchers can rely on. Findings of such ERM research show that empirical research investigating the concepts of ERM in the context of higher education is still not representative of the risk management implementation status in higher education environments (Mikes & Kaplan 2014; Deck 2015; Walker & Shenkir 2018). Even though there are some researchers who have examined and rationalised on the adoption and impact of ERM (e.g., Hallowell et al. 2013; Huber & Rothstein 2013; Lundquist 2015), studies related to the subject remain "inconsistent and inconclusive" for the main reason that there are no sufficient analyses of the usability of ERM "in practice" (Mikes & Kaplan 2014, p. 1). For example, studies such as Hallowell et al. (2013), Deck (2015), Lundquist (2015), Centko (2017) and Perera et al. (2020) provided evidence to suggest that the decision of ERM adoption is influenced by the objective of legitimising the efforts to deal with organisational risks and to safeguard an HEI's reputation and image. In the same context, a study by Huber and Rothstein (2013) supports the thesis that the adoption of ERM by HEIs is mostly driven by *firstly* the aim to improve risk management as a practice, and *secondly* to protect the HEI's reputation. However, there are no current empirical or representative studies that focus on the actual perceptions formulated by risk management practitioners, administrators, faculty members and instructors with regards to the effectiveness and/or usefulness of ERM implementation. In a similar manner, since individual perceptions on ERM and organisational change influence how HEIs evaluate and respond to risk (Deck 2015), it may be concluded that those perceptions must be investigated and identified as part of the current ERM research. At least, the involvement of faculty members has not been a major construct in any of the studies conducted on ERM implementation in higher education. This task has always been a significant challenge in the research field.

Therefore, due to the scarcity of empirical ERM studies and studies investigating academics' perceptions surrounding the effectiveness of ERM implementation in the higher education context (e.g. Hallowell et al. 2013; Deck 2015; Lundquist 2015; Eryilmaz 2018), especially in the UAE context, this study is conducted based on the premise that this research gap needs to be filled through acquiring academics' perceptions on the effectiveness of ERM implementation in HEIs and how ERM plays a role in the QA process in higher education. By investigating those perceptions, this study suggests proposing a framework of guidelines for effective ERM practices tailored for the UAE academic process itself. This framework of guidelines will help function as an empirical research outcome, entertaining recommended potential means and tools for managing the risks associated with the achievement of organisational and academic objectives and excellence in the UAE higher education setting. The outcomes of the study, which revolve around a transregional or international research problem, will benefit not only the

understanding of ERM implementation and effectiveness in the UAE higher education context, but also be applicable to other higher education contexts internationally. The reason for this is that, as stated earlier, the UAE higher education model has started to present itself as fitting in the international higher education formula and becoming more engaging by virtue of a broader academic collaboration with other institutions outside the country, and the acceptance of internationalisation.

1.5 Purpose of the Study

This study was conducted in the light of the identified gap in the ERM research of how the debate and discussion on ERM implementation practices in the context of higher education is increasingly ongoing. The purpose of this study is twofold: 1) to ***investigate*** the perceptions surrounding the effectiveness of ERM (as an academic accreditation, assessment, and evaluation tool) and its implementation in UAE HEIs, and 2) to ***propose*** a set of workable guidelines for UAE HEIs in relation to effective ERM implementation in the UAE higher education context. In this sense, this study does not aim at investigating the actuality of or need to implement risk management as a business model or ERM in universities since, as the literature will show, research has been established over the past twenty years to support this claim. Nor does the researcher aim at advising academic leaders and stakeholders of academic organisations about the right management procedures and tools they must adopt.

The purpose of this study will be responded to by achieving the following objectives:

1. *To investigate the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs.*
2. *To explore the current status of ERM policies and practices in UAE HEIs.*
3. *To propose a set of workable guidelines for more effective ERM strategies for HEIs in relation to effective ERM implementation in the UAE higher education context.*

In a sense, this study focuses on the examination of ERM-based academic institutional practices and how these practices are perceived and availed of by academic administrators in charge of risk management as well as faculty members in UAE HEIs. It is an attempt to add to the existing literature dealing with this topic and provide some more research-based guidelines for effective higher education ERM implementation. In order to achieve these objectives, the researcher proposes a mixed quantitative and qualitative research study in an attempt to achieve the objectives of the study, with the targeted population being a group of representative academic risk management administrators and faculty members, in the context of UAE HEIs.

1.6 Research Questions

This study is an attempt to answer the following research questions, corresponding to the main aim and objectives defined in section 1.5, with the first question being the major research question of the study.

1.6.1 Main Research Question (derived from the purpose of the study)

1) ***RQ1:*** *What are the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs?*

1.6.2 Sub-Questions (derived from the objectives)

2) ***RQ2:*** *What are the current ERM policies and practices in the UAE HEIs? In other words, what are the main aspects of the currently implemented ERM standards, guidelines, and policies that UAE HEIs have, as perceived and described by administrators with risk management responsibility and faculty members with risk management knowledge?*
3) ***RQ3****: What are academic administrators' and faculty members' recommendations for a set of workable guidelines to help build a more effective ERM framework?*

Tables 1.1 and 1.2 show the three research questions of the study in relation to the objectives, participants, methods, and instruments adopted by the researcher by way of answering each question.

Table 1.1 – Questions and Objectives of the Study

Research Question	***Objective***	***Participants***	***Method***	***Instrument***
RQ1: What are the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs?	Investigating the perceptions of ERM among the participants	Faculty members and ERM administrators	Quantitative	Survey
			Qualitative	Interviews
RQ2: What are the current ERM policies and practices in the UAE HEIs?	Exploring the current ERM policies and practices in UAE HEIs	ERM Documents	Qualitative	Document Analysis
RQ3: What are academic administrators' and faculty members' recommendations for a set of workable guidelines to help build a more effective ERM framework?	Proposing a set of workable guidelines for more effective ERM implementation strategies in the UAE higher education context	Faculty members and ERM administrators	Qualitative	Interviews

Table 1.2 – Questions of the Study and Research Tools

Research Question	***Survey***	***Interviews***	***Document Analysis***
RQ1	To de determined (TBD) in the survey questionnaire questions	TBD in the interview questions	N/A
RQ2	N/A	N/A	TBD through the document analysis process
RQ3	N/A	TBD in the interview questions	TBD in the interview questions

This first major question of the study is answered through the major quantitative research tool of a survey via a structured questionnaire adopted by the researcher as the major research methodology and data collection tool. However, it is true that this study starts with the quantitative phase as a major tool for obtaining data, in the sense that there is a questionnaire to be used to answer the major RQ1 of the study; however, the researcher opted to support and complement the findings related to the quantitative questions with the qualitatively designed research tools of document analysis and interviews in order to validate and support the findings of the questionnaire, while answering all three research questions (Creswell 2014).

Therefore, based on the three questions of the research and the answers that the researcher obtains from the research tools, RQ1 will be mainly answered by collecting quantitative data through a questionnaire survey directed to academic administrators in charge of risk management processes and policies, and the faculty members and instructors whose informed participation determine their perception of effective ERM in HEIs. After the quantitatively formulated questions are answered, the researcher will use the responses to help answer RQ2 and RQ3 and inform on the currently adopted risk management practices and existing documents needed for analysis, which will add significance to the findings of the study. After both the questionnaire and interviews are conducted for RQ1 and document analysis is conducted for RQ2, the researcher will conduct follow-up interviews with some selected participants by way of answering RQ3 and supporting the quantitative research findings with some qualitative evidence, as shown in detail in Table 1.1.

1.7 Rationale for the Study

Raanan (2009, p. 44) argued that the notion that academia is immune to the risks threatening the "outside" world no longer holds true in recent times, listing a large number of risks inflicted upon academia, and asserting that "as the academic world is going through a period of unprecedented change, it must also adopt advanced, state of the art management methods, approaches and techniques". He also concluded that "there is no reason why these institutions cannot adopt a management tool which is relatively easy to deploy, inexpensive, and has the potential of improving management's performance quickly – the tool of risk management" (Ibid., p. 55). "Risk management is so important because it enables institutions to potentially avert crises and lessen the impact of those that do occur" (Vandenberg 2017). This study is a planned and systematic attempt to investigate the current knowledge and literature of risk management and how it is perceived and evaluated by faculty members and instructors in higher education. This is achieved through studying ERM practices in several UAE HEIs, using both quantitative and qualitative research instruments.

Recently, there have been a lot of studies and research conducted in the field to investigate the implementation of ERM in higher education, and there are many other studies that focus on how risk management is related to the contribution to improved academic and organisational performance in higher education (Abdul Halim 2007; Bin Md. Et al. 2014; Deck 2015; Lundquist 2015). Bin Md. Et al. (2014), for example, concluded that a framework for the effective management of risks is much needed in HEIs. According to them, the ERM framework is a best practice approach that can be applied in higher education settings. However, there are still very few studies that have managed to investigate the effectiveness of ERM as a tool and process as perceived by academic administrators and faculty members in the higher education context. Generally, "ERM is not a new fad (Fraser et al., 2008) or fashion and its significance would boost in the near future particularly due to the emergence of new types of risk. However, despite these developments, ERM literature is still in infancy…" Eryilmaz (2018, p. 244). Therefore, through this study, the researcher plans to build on internationally existing studies in order to provide answers to the research questions of the study, as well as to investigate both quantitatively and qualitatively the academic perceptions surrounding major concepts of effective ERM implementation in higher education.

However, throughout reading and analysis of the literature related to the subject of the proposed study, the researcher has found very few studies in the UAE that attempted to investigate the effectiveness of ERM implementation and perceptions surrounding them in HEIs. In his thesis on ERM and firm performance, Sithipolvanichgul (2016) advocated the notion that there are even fewer studies and

research in the field to propose a solid tool to measure ERM implementation in academic contexts. The current researcher would agree that one of the main limitations that faces researchers in this field is the lack of a good measurement tool for ERM implementation. In this sense, through this study the researcher tries to provide some investigative analyses of ERM perceptions that aid the initial discussion and main purpose of the study with regards to the effectiveness of ERM in the higher education context.

Even though the theories surrounding corporate risk management are well established, "the literature on ERM is still in its infancy and much of the existing evidence comes from survey and case studies" (Eckles, Hoyt & Miller 2011, p. 3). A lot of the recent research underestimates the importance of ERM to institutional academic performance and effectiveness. Additionally, very few research studies utilised a mixed research approach of quantitative and qualitative tools to investigate the major constructs of this study. As mentioned earlier, examples of studies in recent years include Mansour (2009); Beasley, Branson and Hancock (2010, 2012); the CAA (2019a & 2019b); Al-Jundi (2012); Soomro and Ahmad (2012); El-Refae and Belarbi (2015); Warner and Burton (2017) and Gallagher (2021). All such studies focused on the literature review of ERM from a business perspective, and the conceptual analysis of the issues related to ERM and quality constructs separately, as well as some qualitative research analyses provided merely for the sake of conceiving results and findings, without proposing a model or guidelines for improvement. In this sense, more research is required to be conducted in the UAE to deal with ERM specifically, as one enhanced and mature aspect of risk management and how it fits the UAE higher education context.

1.8 Structure of the Thesis

This thesis comprises five chapters, a list of references, and eight appendices.

Chapter One offers introductory background information, and an overview of ERM and its relation to the concept of QA in higher education contexts, both globally and locally. The chapter also identifies the problem statement of the research, accounting for the challenges faced by higher education stakeholders as well as the gaps in the empirical research surrounding ERM, and outlines the rationale for conducting the study, as well as the choice of an explanatory mixed-method study design in order to contribute to the body of higher education research in this area of ERM while answering the main and subordinate questions.

Chapter Two is a review of the main literature of ERM and ERM in higher education, providing both theoretical and proposed preliminary conceptual framework support for the study. The chapter includes

the Theoretical Framework and the proposed preliminary Conceptual Framework of the study, as well as situating the topic of the study within the previous literature. It first provides an account of the main theories delineating the Theoretical Framework of the study, and then moves on to trace the evolution of risk management and provide definitions relating to the major concepts and terms used in the research such as “risk”, “risk management”, “QA”, “decision-making”, and “risk perception”.

Chapter Three introduces and describes the methodology of the study. It provides the rationale for selecting the explanatory mixed-method study design to achieve the main aim and objectives of the study, as well as answering its questions. It provides a description of the methods and procedures used for both the quantitative and qualitative data collection, the justification for the sampling technique used, and the data collection instrument and analysis approaches utilised in the study.

Chapter Four presents the findings and results of the study, outlining the quantitative study results, the qualitative study results, and the integration of and relationship between the two. The chapter contains an explanation of the findings of both studies in the light of the proposed preliminary Conceptual Framework of ERM implementation and integration in the targeted UAE HEIs. The chapter then summarises the findings and presents the conclusions of the study.

Chapter Five is dedicated to an engaged and analytical discussion of the research findings. It also highlights areas in the research relating to identifying the strengths, limitations, and recommendations of the study. It provides the implications for the findings in the UAE context and sets the recommendations both for practitioners and stakeholders of the ERM subject, as well as for further research and study in the same field.

1.9 Chapter Summary

This chapter has provided the introduction to the thesis and defined the main focus area of the whole study. The chapter began with a background section where all the general thematic, conceptual, and contextual information related to the main topic of the research were provided. Then, the UAE research context in relation to the topic of the study was presented. This chapter defined and set the focused context of the study in its relevance to the UAE research and formal policies on the subject. This was followed by defining the problem statement of the study, from both thematic and research perspectives, as viewed in both the international and local contexts of the higher education ERM implementation inquiry. Next, the chapter concluded by defining the rationale of the study, the main aim, objectives, and related questions of the study, which will later define the research methodology, instrumentation, tools and data analysis methods. An overview of the thesis structure was presented to conclude this chapter.

CHAPTER TWO: LITERATURE REVIEW – CONCEPTUAL ANALYSIS, THEORETICAL FRAMEWORK & REVIEW OF RELATED LITERATURE

2.1 Introduction

This Literature Review chapter makes an account for the three major theoretical components of the study. It is an exploration of basic and strategic theories relevant to the ERM topic and its relevance to management and higher education. It also provides an analysis of the major concepts delineating the ERM research, including ERM adoption, implementation and decision making at higher education institutions. Finally, it situates the ERM research and its relevance to higher education within the context of recent and relatively recent literature.

The chapter starts by introducing the three major theories from which both the proposed preliminary and final confirmed conceptual frameworks of the study benefit. All the three major theoretical components of this chapter provide for an analysis and an overview of the process of ERM adoption and implementation and how it impacts HEIs in the same way it does for business and financial institutions. The three conceptual areas on ERM implementation in HEIs are explored from research perceptive, targeting organizational change and decision making as two major conceptual components leading to academic effectiveness. The final section of the chapter defines and analyses the concept of ERM and puts it within the context of higher education management research and literature. Based on these analyses, understanding perceptions of academic stakeholders emerges as a critical concept which influences ERM implementation at HEIs. The findings of literature review are then used to maintain the study claims and defend their validity and relevance to the UAE context, throughout the methodology and findings chapters.

2.2 Theoretical Framework

To put it in the words of Grant and Osanloo (2014), "the theoretical framework is the ***blueprint*** for the entire dissertation inquiry" (p. 13), in the same manner as "a blueprint serves as a guide for all those who are involved in the construction of the home" (p. 12). The authors' metaphor is based on the fact that just like a home cannot be constructed without a blueprint, so will the structure and vision of the study be unclear. However, putting ERM research within the theoretical framework of higher education unique context has never been an easy task. In his research, Centko (2017, p. 20) concluded that "the past practice of senior administrators and ad-hoc committees using mundane risk-management methods is outdated and unable to effectively manage risk". Reasons for that is that risks are steadily evolving and therefore response to them as well as studying their relevant theories are ever changing, too. While "the theory of ERM is to

maximize the possibility for an organization to achieve the identified strategic goals" (Centko (2017, p. 21), there should always be a constructivist process managed by risk management stakeholders which puts ERM within its convenient framework at a given organisation, whether this framework is viewed as theoretical or empirical.

For this reason, the theoretical framework adopted by the researcher in this study is based on the constructivist approach adopted in management theories. The components of this theoretical framework help clarify that vision and paves the way for formation of the conceptual analysis as well as selection of relevant literature. The theoretical framework which serves as a blueprint of this study mainly derives from the literature of corporate and educational theories on ERM, prevalent over the past decades. This study has basically relied on research exhaustively conducted in the management field drawing on management theories established within the context of higher education. One of the major theoretical components of this study is to understand how empirically various management theories used in this research field are applicable to the investigation of ERM and its aspects. Additionally, the theories referenced in this study were chosen by the researcher based on the premise that they would lead to better understanding of the research findings by informing the conceptual analysis and deciding the type or literature to rely on.

The theoretical framework of this study is mainly based on recent ERM literature in the context of higher education and how it relates to the major concepts of this study. Several studies such as Van Den Ven (2007), Scott (2014), Lundquist (2015), and Deck (2015) has drawn on several management theories that ultimately comprise the "Organisational Change" theory and explained how they play a major role in the investigation of ERM as a concept in higher education. Deck (2015, p. 38) cited seven independent but related theories that fall under the framework of the Organisational Change theory and argued these theories "play a prominent role in this [type of ERM] study", to include: "(a) institutional theory, (b) legitimacy theory, (c) organizational resiliency, (d) models on change management, (e) sense-making theory, (f) theories of action, and (g) absorptive capacity." In this study, the researcher adopted specific theories from Deck's (2015) list of theories that are directly related the "organisational change" factor relevant to the ERM adoption and implementation process. Those adopted are the Institutional theory and the Legitimacy theory. The other theories in Deck's list are discarded either because they relate to aspect of organisational change that is not relevant to the Conceptual Framework of the study or for being not useful to the investigation of ERM as a framework or policy.

Therefore, as a general starting statement, there is a justification for the choice of each of such theories based on the nature of the research questions and the expected outcomes. In this sense, findings related to the relationship between the factors leading to a HEI adoption and implementation of ERM, for example, would be best represented in the conceptual area of the institutional theory, while findings which touch upon the effectiveness of ongoing, dynamic, and long-term academic processes involved in ERM implementation adhere to the overarching Organisational Change theory in general. This study is therefore based on the following three major theories common in current educational leadership and risk management research and studies:

1) *The Institutional Organisational Theory*
2) *The Legitimacy Theory*
3) *The Organisational Change Theory*

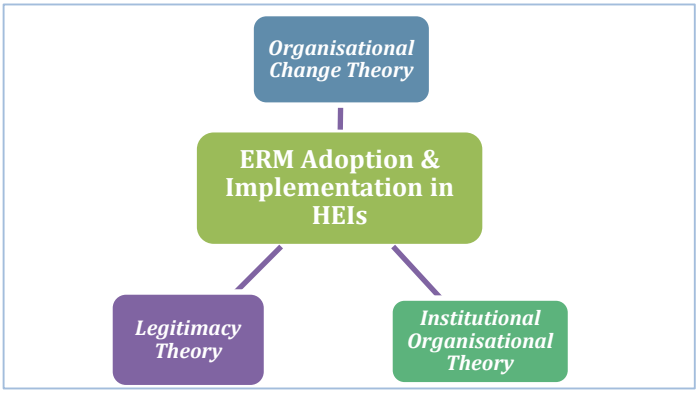


Figure 2.1 – Theoretical Framework

Figure 2.1 shows how only two of the seven theories cited by Deck (2015, p. 38), as detailed in Figure 2.2, have been adopted by the researcher to justify the theoretical framework of the study. As stated by the researcher earlier, the main justification for this selection is the fact that the Conceptual Framework is intended to be integrated within the theoretical framework, and the Conceptual Framework relies mainly on the theoretical factor of "change" as identified in the three cited theories.

In this sense, the researcher relied on the premise that these three theories can be integrated to form a single theoretical framework for the research. This integration was the result of two factors. First, as shown in Figure 2.1, each of the three theories share theoretical and conceptual characteristics related to the central focus of the research, that is the justification of and need to adopt ERM to produce the desired "corporate change". Second, literature proved that each of these theories are interrelated to one another in not only sharing theoretical and conceptual elements of change but also in complementing each other's weaknesses and limitations, as will be explained in the following sections.

2.2.1 The Institutional Theory (The Sociological Organisational Theory)

In this study, the researcher would limit focus to the Institutional Theory as part of the bigger sociological, socio-economic organisational theory, and yet being an essential component of the Organisational Change Theory (Section 2.2.3). Scott (2014, p. 56) defines the Institutional Theory as the theory which deals with institutions as the core block of social life, where "institutions comprise *regulative*, *normative*, and *cultural cognitive* elements that, together with associated activities and resources, provide stability and meaning to social life". Research has identified that the institutional theory and other management change theories have been extensively used to analyse how different organisational factors would shape the decision for ERM adoption and how the implementation process is being conducted (Deck 2015, p. 38). In the Conceptual Framework analysis, the researcher provided for the significance of the relationship between ERM implementation and elements of academic organisational, institutional and performance change, thus giving the rationale for opting to this theory as a major theoretical component of the study. Deck (2015, p. 51) posited in his research that "institutional theory contributes to understanding how institutional forces support and motivate ERM implementation". In this sense, based on prominent research done in the field, the researcher justifies the use of this theory as both related and leading to a major conceptual component of the study, that is "institutional change". Based on previous literature, in a sense, the researcher concluded that this theory is interwoven into the elements of organisational change, and this in itself is the pivotal product of the study inquiry of ERM implementation and its impact on HEIs.

According to Cai and Mehari's (2015), in their overview of the Institutional Theory, "organisation studies and higher education research are two dynamic domains within social sciences with a reciprocal effect on each other's development" (p. 2). Since according to Greenwood et al. (2008) the institutional theory has increasingly become a powerful exploratory tool for the analysis of various organisational phenomena in new societies, they claimed that study of the ERM implementation in higher education as a change tool cannot be complete without shedding light on its relevance to the institutional theory. However, the challenge remains in the fact that literature in educational research applying the institutional theory is still lacking (Cai and Mehari 2015), where few recent studies on the subject would be worth highlighting.

In this sense, this study has no room for an elaborate and extensive analysis of the giant sociological organisational theory that goes back to as early as the beginning of the 20th century (Haveman and Wetts 2019). According to Haveman and Wetts (2019), the organisational theory found its first validity origins

in the philosophies of economist, sociologist and socio-political theorists Karl Marx and Maximillian Weber. Modern philosophers and sociologists, such as Durkheim and Simmel, emphasized the fact that the organisational theory proposes and advocates realistic solutions of organizational issues and helps institutions sustain more productivity in their processes. This organisational theory in general would maintain interest in rational decision-making and environmental conditions that shape organizational processes and outcomes, being part of the social and pragmatic contingency theories. A major part and parcel of the organisational theory comes the institutional theory which was defined by Cai and Mehairi (2015, p. 2) as a "popular and powerful explanatory tool for analysing a variety of organisational phenomena in contemporary society". The reason it is included it in this ERM study is that as posited by Cai and Mehairi (2015, p. 2) "since the turn of the new millennium, it has gradually moved to centre stage in higher education research" and especially in risk management research as evidenced by Lundquist (2013; 2015) and Deck (2015).

Cai and Mehari (2015) concluded that the Institutional Theory developed through three main stages: "namely old institutionalism (originating at in the end of the 1940s and the beginning of the 1950s), new institutionalism (originating at in the end of the 1970s and the beginning of the 1980s) and a variety of new perspectives on institutional theory (evolving since the 1990s)" (p. 3). Greenwood et al. (2008) defended the notion beginning of the 1990s that new institutionalism gradually developed into the more recent model of institutionalism where it started to involve more elements required for institutional or organisational change, a concept that had long been missing in the tenets of old institutionalism.

2.2.1.1 Relevance of the Institutional Theory to higher education and ERM research

The institutional theory is relevant to the context of ERM research in the sense that it does not only present the rationale for an organisation's or HEI's decision to adopt change in the form of ERM, it also helps determine the type of ERM model an institution can implement. Deck (2015, p. 51) states that the "institutional theory contributes to understanding how institutional forces support and motivate ERM implementation" and adds that "although the COSO (2004) ERM framework refers to normative and culture-cognitive elements, the framework relies heavily on the regulative element outlined in institutional theory". The works of Greenwood et al. (2008), Cai and Mehari (2015) and Haveman and Wetts (2019) show that that institutional analyses in higher education research mainly deal with management and policy issues. In HEIs, and even more so in the context of UAE HEIs, such management and policy issues would include for example problems and challenges relating to strategic decision making, conflict of interests between faculty members and administrators (the subjects of this study),

competitiveness in the market, leadership issues and their impact on, and contribution to, the HEI image and reputation, profit and return issues, and finally issues related to ranking and formal evaluations. However, since it is agreed among researchers, as the literature of this study shows, that the context of HEIs is different from that of the business world, new ERM practices need to be implemented in order to face those challenges. In this study, it is proposed that ERM implementation would fall under the institutional theory parameters in that it helps unpacks and resolves all issues which face higher education stakeholders. In a sense, when HEI leadership or top management senses the hazard of their reputation and image being at risk, they rapidly rush to implement ERM as firstly a covering shield which justifies their way of management, and secondly as a mark of positive change, and who in the academic setting would not seek positive change at times of proven risk.

However, based on institutional theory literature, it is evident that other issues related to the teaching and learning processes, curriculum design, teacher-instructor-student interactional experiences, quality and quality assurance, academic work and knowledge, and research are all included in the literature of Institutional Theory (Gioia and Thomas, 1996). Literature on this theory also shows that studies on these subjects, as well as the analysis of their associated issues, are for the main part approached at the level of HEIs. In this direction, it was found by Tight (2012) that institutional theory topics in the majority of research concern governance, structure, system policy, management, leadership and the history and evolution of HEIs, etc. To that effect, research on such subjects is investigated in one of two ways, either at the level of HEIs or at the level of national systems, which leads to shortage in micro-level analysis of such topics.

Therefore, since new institutionalism has identified itself as the major resource for Institutional theorizers, it is of no surprise that the Institutional Theory is mainly focused on studying policy and management change issues and with a primary focus on organisational change within organisational operating environments. In this sense, it can be argued that this theory would best facilitate the understanding of issues related to management and policy change in HEIs as shown in the proposed preliminary Conceptual Framework (See Figure 2.3) and final confirmed Conceptual Framework (Figure 5.1) of this study. ERM research has shown that reforms in higher education systems in general are best approached from a top-down decision-making perspective. In other words, in order for organisational change to take place effectively, strategic managerial decisions must be involved and invested on. In this sense, since ERM as a process is the ownership of top management at a given HEI, institutionalism and more specifically contemporary institutionalism, which defends top-down decision making, would be the

ideal tool to be adopted to resolve issues and problems related to the effectiveness of ERM implementation in relation to academic performance and effectiveness. Cai and Mehari (2015) cite the empirical and academic research applying new institutionalism as follows: Arnold, 2004; Bernasconi, 2006; Brint, Proctor, Murphy, Turk-Bicakci, and Hanneman, 2009; Gonzales, 2012; Webber, 2012; Youn and Price, 2009. In this perspective, the application of ERM into academic leadership form an institutional point of view which can be a dominant factor ensuring the stability, organisational resilience as well as survival of HEIs.

2.2.1.2 Weakness of the Institutional Theory

As mentioned earlier, research on Institutional Theory is approached mainly at the HEIs top managerial level, namely the level of owners, sponsors and/or decision makers. For that reason, the theory lacks the details of micro-level analysis required for institutional change (Cai and Mehari 2015, p. 9). The findings of studies mentioned in previous section for example may well indicate that the Institutional Theory itself was not meant to have been developed as a theory for organisational change, as this study proposes ERM implementation would indeed aim at, but rather provides an analysis for organisational arrangements in a given organisational environment. In this sense, such findings of previous research challenge the dominant views of Institutional Theory on management and leadership change. This theory may be seen as weak in its attempt to merely analyse the internal factors leading to organisational change and as such ignoring factors which lead to real change of power factors and efficiency which are major components of a successful management and leadership (Greenwood *et al*. 2018). Cai and Mehari (2015) investigated 93 articles on the subject of Institutional Theory and "of the 93 articles, 39 combined new institutional theory and other theories. As claimed by most authors, the reason for so doing was that the sole use of the theory is not enough to comprehensively grasp the nature of HEIs" (p. 11). Therefore, another more ERM specific and sophisticated theory would be worth presenting in this study to justify the application of ERM as a major management tool, and that would fall within the tenets of the legitimacy theory.

2.2.2 The Legitimacy Theory

Stensaker (2018, p. 58) provides for the definition of the legitimacy theory "as cultural support for a given organization or a practice in its environment, and that the existence, functioning and actions taken are desirable and appropriate. As such, legitimacy is a relational concept – a product of an interaction between two or more actors". This definition summarises the ERM relational conceptual framework of input and output adopted by the researcher in this study. Stensaker (2018) derived his understanding of the legitimacy theory from Suchman (1995) who defines the legitimacy theory as a theory which helps

organisations create “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (p. 574). According to Suchman, the legitimacy theory is the theory which provides an answer to the issue of acceptability and credibility of actions taken by managers and stakeholders at a given organisation or institution. This definition would be convenient to the context of this study in the way it justifies change, as a relational product of the ERM process adopted throughout the study. In fact, the researcher argues that all actions associated with the ERM process, including quality assurance and effectiveness, are justified by elements of the legitimacy theory and lead to justification of the vitality of quality assurance in HEIs as an ultimate product of the academic ERM process. Stensaker (2018) investigated this relationship between legitimacy and quality assurance in higher education and concluded that “legitimacy is a key issue for the functioning and role of quality assurance, but that such legitimacy may be obtained in different ways and forms” (p. 55). To put it in the context of UAE ERM research, UAE HEIs for example seek to achieve quality assurance through a process of legitimacy; namely through adopting established, legal and binding formal practices and applying routine corporate governance policies.

Recent research has proven the importance of relying on Legitimacy Theory in ERM studies to achieve desired outcomes in the academic environment (Suchman, 1995; Ravasi and Schultz 2006; Walker 2010; Thomas and Lamm 2012 and Deck 2015). Suchman (1995) defends the notion that the legitimacy theory is an essential theoretical framework element which explains the aspects which shape and define the acceptability of management members at a given organisation for a decision like ERM adoption and implementation. Similarly, in the higher education research context, Deck (2015, p. 175) concluded that the legitimacy theory is important for the adoption and implementation of ERM since it provides a rationale and explanation for the motives underlying ERM adoption. One of the positive reflections which researchers can get when analysing the legitimacy theory is that an organisation’s actions must be consistent with the socially accepted norms in their respective environment and context. Walker (2010, p. 367) argued that the conceptual justification of adopting legitimate actions in research comes from three facts which determine the appropriateness and desirability of organisation actions. The facts include the *identity*, the *image* and the *reputation* of the organisation as being negatively versus positively impacted through their actions. He also argues that the critical factor affecting the legitimacy of a HEI’s actions is how perceptions of activities are made by their internal and external leadership panels.

Therefore, in this study, the researcher resorted to the legitimacy theory in setting up the theoretical framework because it explains the logic for why leadership at a HEI may opt for the implementation of ERM in effectively and efficiently dealing with institutional risks as well as achieving their strategic objectives, with quality assurance being the most vital among them. In a word, HEIs leadership and management tend to be motivated into the adoption of ERM practices into their management systems for the sole and most significant objective of demonstrating the legitimacy of their actions. HEIs leadership would understandably seek to justify their actions by adopting an accepted and legitimate form of risk management and they would find the solution in ERM implementation. This provides a justification for the conceptual framework of this study which reflects the interrelatedness of both the legitimacy and the organisational change theories as crucial factors determining the effectiveness of ERM implementation at HEIs (Figure 2.1).

In summary, even though the "Legitimacy and institutional theory theories advance understanding of why an HEI would adopt ERM" (Deck 2015, p. 175), the theory which the researcher claims would complement all previous mentioned theories and would best account for academic effectiveness as a major outcome of the proposed preliminary conceptual framework of this study, effected through ERM implementation, is the Organisational Change Theory.

2.2.3 The Organisational Change Theory

Organisational change research in higher education context has been through different stages of development over the past three decades (Farquharson, Sinha and Clarke 2018, p.150). A decent amount of research has recently provided evidence for the need of organisational change theory in management and risk management research evolving in the higher education context (Allen 2003; Baker and Baldwin 2015; Farquharson, Sinha and Clarke 2018). Farquharson, Sinha and Clarke (2018, p. 151) argue that there is a strong inclination among academics in the UK and worldwide to reconsider traditional ways of approaching change in HEIs. Allen (2003) and Baker and Baldwin (2015) defended the need for HEIs to revolutionise their traditional higher education structures and processes, as well as their governance and management systems. This came as a natural result of the dramatic changes throughout higher education systems, not only in the UK, but worldwide. Such dramatic changes would apply to the UAE context in the same way they apply worldwide, and they would include the following: novel pedagogical approaches and technologies, developing and changing national and regional higher education policies and regulations, student re-conceptualisation as a consumer, emerging environmental and sustainability issues, and the pressing need to engage with both private and public businesses to meet upcoming

demands for the labour, skills and skill-based market, and finally the need to justify the market real-life value of an academic degree (Baker and Baldwin 2015).

In the same context, Van de Ven and Poole (1995, p. 512) defined the organizational change theory as a theory concerned with "a difference in form, quality, or state over time in an organizational entity". Such general definition would not so much serve the purpose of this study and identify its relation to the highly particular term of ERM. Similarly, the researcher has found in the COSO and ISO 31,000 risk management frameworks a different, but still limited and lacking, understanding of how ERM implementation in an institution could well lead to a change in the organisational culture of a HEI. These two frameworks present change as a primary concern with ERM implementation. In this context, one justification for the use of Organisational Change theory in ERM is provided for in the COSO 2004 and 2017 ERM framework versions. According to COSO, organisations of all kinds choose to adopt change if they have to address the different levels of risks and if they opt to achieve their objectives. The COSO 2017 framework specifically includes elements of control activities such as assessments, verifications and authorisations which necessitate change. Still a more profound and academically relevant definition of organizational change is required to indicate how a change in culture helps improve the ERM implementation processes in a given academic environment, and vice versa.

Scott (2014) explained that the Organisational Change theory is best defined and understood as the overarching theory of management theories, including seven management change theories. The researcher utilised this discussion and adopted this definition of the theory in order to best represent the proposed preliminary Conceptual Framework of the study indicating how different elements of organisational change could lead to effective implementation of ERM in HEIs. The following figure, adapted from Deck (2015, p. 39), shows how these theories are interrelated and how they contribute to the main topic of this study of ERM implementation and effectiveness:

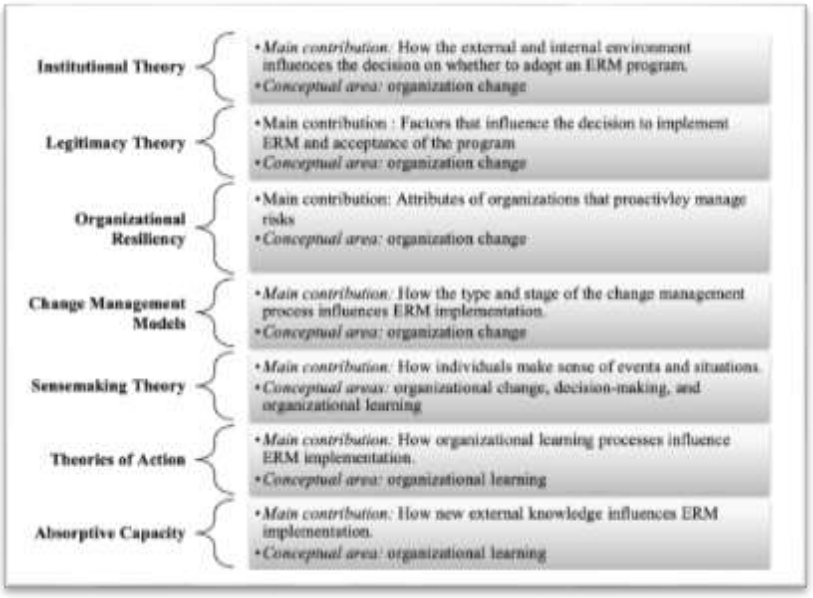


Figure 2.2 – Management Theories and How they contribute to the ERM Conceptual Framework of this Study

In educational research, organizational change can be defined as that tool which the stakeholders and decision-makers adopt to "examine how the type and stage of the change management process influences ERM implementation" (Deck 2015, p. 41). Additionally, in educational research, examples have been given of the use and importance of organisational change theory in HEIs context. For example, Deck (2015) explained how in the UK HEIs have gone through pressure from government agencies as well as the board of directors of universities to produce organisational change in their institutions. This in itself gives a justification for the adoption of organisational change as a theoretical component of any ERM implementation study.

In summary, the major reason the researcher is adopting this theory in the study is to justify and explain the study proposed preliminary Conceptual Framework (Figure 2.3), where effective organisational changes caused and necessitated by ERM implementation in HEIs are the same dominant elements prevalent by the corporate business organisations. The researcher argues that the only difference is the outcome desired by HEI stakeholders from that change. In simple terms, the Organisational Change and the Institutional theories both touch on effective change management. They were both used in this study to enable the researcher firstly to look into the conceptual framework from a more solid theoretical background, and secondly to understand how to implement a broad and general organisational initiative such as ERM in the academic environment. However, this claim by the researcher seems contrary to the views of Allen (2003) on organisational change which suggest that there are always calls to alienate HEIs from becoming more 'business-like' (Allen 2003). However, recent ERM research on HEIs has always

proven that HEIs can be as responsive to social and business-like changes requirements as business institutions themselves (Radnor and Osborne 2013).

One weakness of the organisational change theory research in HEIs is that it is still "underdeveloped" and lacking (Farquharson, Sinha and Clarke 2018, p.150). Another weakness is that throughout educational research it has only focused on case studies of individual institutions (Bleiklie 2014). Such research has only investigated the ways HEIs are conceiving change on the basis of individual cases, and there is still a need to design a clear research framework convenient for the unique culture of higher education.

2.2.4 Summary of the Theoretical Framework

Research on ERM implementation in higher education context would not be complete without making a reference to related theories on education and learning. Recent research has proven that this is still one of the shortcomings of higher education ERM research. In her research, Lundquist (2015, p. 7) concluded that generally "ERM needs theories", which is a major concern of academics. However, she concluded what is also supported by the literature review of this study that "a grand theory of ERM … is far from being achieved". This missing "grand theory" of ERM would ideally address all aspects of interdisciplinary concepts, most importantly including the academic. However, in this study, one theory that would delineate the significance of ERM implementation in higher education context would be viewed to be the Organisational Change theory and how it well fits into the parameters of the sociological teaching and learning theories.

2.3 Conceptual Framework and Definitions of Key Concepts

This study conceptual framework is centred around the basic assumption that "ERM framework should recognize how the organization's existing assumptions and behaviors influence ERM effectiveness" (Deck 2015, p. 51). In the conceptual analysis section, the major key terms used in the study are defined and how they found their way as major constructs into the repository of ERM research in educational literature is explained. These major concepts are derived from and form the building blocks of the theoretical framework of this study, and they include:

Risk (or risk management, enterprise risk management), corporate governance and internal controls, organisational change, decision making, academic effectiveness, and finally *quality assurance.*

Research on ERM has proved that three of these constructs were outlined by COSO as major conceptual areas of ERM implementation worldwide: *Risk management, organisational change* and *decision making* (Deck 2015, p. 30). The researcher adopted these three constructs in presenting the proposed and preliminary Conceptual Framework (See Figure 2.3) and through data analysis this framework will be validated and tested against the confirmed results to conceive a final and confirmed conceptual framework of the study (See Figure 5.1).

2.3.1 Defining "Risk", "Risk Management" and "Enterprise Risk Management"

"Wise men say, and not without reason, that whoever wished to foresee the future might consult the past." With these words, Niccolò Machiavelli, an Italian Renaissance historian, politician and philosopher, defined the concept of risk in so much of an indirect but comprehensive manner. The requirement for HEIs to define their understanding of the term *risk* is never an easy task. Definition of risk and risk management comes at the core of the conceptual framework of this study and would inform the whole process of ERM implementation in the higher education context. The terms *risk* and *risk management* have been identified as the most widely used terminology among owners, stakeholders and managers of businesses and institutions of all kinds (Hillson, 2019). However, putting *risk* and *risk management* in the context of higher education research, more elaborate and profound definitions need to be put in place.

One of the earliest definitions of the word "risk" of all time is accounted to be first found in Bernstein (1998) who defines it as follows: "The derivation of the word "risk" reaches back to the early Italian ***risicare***, which translates as ***to dare***. Risk looked at from this viewpoint is a choice rather than a fate." (p. 8). Risk is viewed by all institutions; whether political, religious, philosophical, technological, legal, ethical or moral, etc.; as a way to refer to *uncertainty* (Hillson, 2019; Hillson, 2016; Spikin, 2013) as well as *opportunity* (Beasley, Branson and Hancock 2012; Hillson, 2019). Dionne (2013) argues that risk management is by definition handling uncertainty. "The goal of risk management is to create a framework that will allow companies to handle risk and uncertainty" (p. 8). Economist Frank Knight (1921) was among the first in history to draw attention to risk in the sense of uncertainty. Knight's work *Risk, Uncertainty, and Profit* introduces risk in the meaning of uncertainty, claiming that since risk is immeasurable by nature, therefore it cannot be calculated. This study would rely on defining risk in a more positive perspective as opposed to the negatively viewed concept of uncertainty, in the same way as Emblemsvåg (2010) defines the difference between risk and uncertainty in that "risks arise due to decisions made, while uncertainty is due to lacking information" (p. 253). Al-Jundi and Ahmad (2016)

define risk as “the threat or possibility that an action or event will adversely or beneficially affect an organization’s ability to achieve its objectives” (p. 67). Their statement on risk tends to be acceptable to all researchers where they assume that “the first step first step in looking at risk management is to understand what risk itself means” (*ibid*.). According to Šotić and Rajić (2015), the Risk Management Vocabulary 2002 introduced the definition of risk as “a combination of the probability and scope of the consequences” (p. 19). All such definitions indicate how risk should be viewed in the ERM research context from its positive side of yielding opportunities, while at the same time not neglecting the negative impacts of uncertainties to learn lessons and achieve objectives.

It is accepted in recent ERM research that the most commonly used definition of risk management comes from ISO 31000: 2018 Principles and Guidelines. Risk is defined here as the “*effect of uncertainty on objectives*.” The ISO 31000 dissects the definition by explaining that an “*effect*” is a “deviation from the expected. It can be positive, negative or both, and can address, create or result in opportunities and threats”. “*Objectives*” are materialised as “different aspects and categories and can be applied at different levels”. Lundquist (2015, p. 13) adds that “*Uncertainty* exists whenever the knowledge or understanding of an event, consequence, or likelihood is inadequate or incomplete”. In a similar manner, Boukhari (2013) also concluded that risks are uncertainties which may have considerable impacts on things and objectives. In this sense, risk is an impact that would lead to change or deviation from the norms, a deviation which could be either positive or negative. However, according to ISO 31000: 2018, uncertainty is manifested whenever our awareness of the events or circumstances surrounding us is not defined, or whenever the probability of events happening is not sufficient or complete.

In a corporate enterprise environment, risk would mean different things in different contexts. A well-established organisation will define its own risk in its own way. Businesses would define risk and measure it by the impact it would have as a concept on their performances and objectives (Sithipolvanichgul 2016, p. 17). Hopkin (2012) introduced the definition of the term “risk” from a corporate perspective based on the definition of the Institute of Risk Management (IRM): “Risk is the combination of the probability of an event and its consequence. Consequences can range from positive to negative”. In this sense, risks are defined and measured by the impacts and consequences they would create.

Following is an adaptation from Hopkin (2012) in his definition of risk from a business corporate perspective:

Table 2.1 – Definitions of Risks from Corporate Perspective (Sithipolvanichgul 2016, p. 17)

Organisation	***Definition of Risk***
Ward (2000)	The cumulative effect of the probability of uncertain occurrences that may have a positive or negative effect on a project's objectives.
ISO 31000 (2009)	The effect of uncertainty on an objective. Note that the effect may be positive, negative or a deviation from the expected outcome. Risk is also often described by the event, a change in circumstances or a consequence.
IRM (2002)	Risk is a combination of the probability of an event and its consequences, which can range from positive to negative.
HM Treasury (2004)	Uncertainty of an outcome, within a range of exposure. This arises from a combination of the impact and the probability of potential events.

From an academic educational perspective, the definition of risk might not be different. A frequently used and common definition of risk is presented by the Higher Education Funding Council for England "the threat or possibility that an action or event will adversely or beneficially affect an organization's ability to achieve its objectives" (HEFCE, 2001). Risk management has also been defined in traditional terms as "the process of making and implementing decisions that will minimize the adverse effects of accidental losses on an organization" (Baranoff, Harrington and Niehaus 2005, p. 15). Spikin (2013, p. 95) defines risk management as "the distribution of possible deviations from expected results and objectives due to events of uncertainty, which might be internal or external to the organization". He then argues that the effects of risk factors could be either positive or negative and proposes that the risk also mean the cause of both potential losses and opportunities.

Over the past two decades, risk management has been used as a synonym of ERM in almost all fields of study (Lundquist 2015). Examples can be drawn from the findings of a study conducted by Hoyt and Liebenberg (2011) which shows examples of how in research ERM is used in different organisational contexts, such as banking, corporate, academic… etc., as a term synonymous with all kinds of risks, including the *holistic*, the *strategic* and the *integrated* risks. Ibrahim and Esa (2017, P. 186) stated that "Enterprise-Wide Risk Management (EWRM), *Holistic Risk Management* (HRM), *Integrated Risk Management* (IRM), *Strategic Risk Management* (SRM), *Corporate Risk Management* (CRM) and *Business Risk Management* (BRM) are the examples of different terminologies which are synonymous with ERM term". The term ERM was first introduced into "the business lexicon two decades ago and has since developed into the gold standard of corporate governance practices" (Blaskovich and Taylor 2011, p.5). Lundquist (2015) defines ERM as "a process, built into routine business practices, designed to identify, assess, prioritize, and manage key risks that may have an impact on the ability of an organization to attain their long-term strategic objectives" (p. 2). The majority of ERM literature also

defines the term risk management in the same way it defines integrated risk management, business risk management, holistic risk management, and most importantly ERM (Liebenberg and Hoyt, 2003; Drew, Kelley and Kenrick, 2006; D'Arcy, 2012; Lundquist 2013 and 2015; Hillson, 2019). Lermack (2008) explained ERM by comparing it to traditional risk management, where risks are responded to on an ad hoc basis only once identified. According to the author, ERM "is a process designed to identify, assess and prioritize, and prevent and manage the key risks that may have an impact on the ability of an enterprise to attain their long-term strategies and objectives" (p.2). Hillson (2013) defines ERM as a comprehensive and integrated framework for managing risk at all levels within an organisation. Hillson (2019) also elaborate on the definition of ERM when he investigates the positive side of organisational risk, a concept he refers to as the "upside" of risk, meaning an obtained opportunity. Recent literature review in this area would also manifest the work of Bromiley *et al.* (2015) who provided a variety of different definitions of ERM. They managed to present a fresh definition of ERM as *"the integrated management of all the risks an organization faces, which inherently requires alignment of risk management with corporate governance and strategy"* (Bromiley *et al*. 2015). This definition fits into the context of this study since it presents ERM within the perspective of corporate governance and strategy, which is an essential element of the conceptual framework of this study. However, it lacks reference to ERM as a comprehensive organisational process.

On the use and adoption of ERM terminology into organisational strategies and processes, Lundquist (2013 and 2015) argued that there is still a huge variability into the concept. In her view, the term *risk management* has been utilised in different ways and through different approaches in its implementation in different organisations. She also stated that "recently, the term "governance, risk and compliance" (GRC) has begun to be used in addition to, or to replace, ERM, thus causing confusion in identifying and articulating the elements of ERM models" (Lundquist 2013, p. 146). COSO (2004) introduced a working definition of ERM which has later been referenced by several United States and international official standardization organisations (Deck 2015, p. 22). According to COSO (2004), ERM is "*a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives*" (p. 4). This definition includes all the elements of ERM required by academic stakeholders in order to achieve academic effectiveness and quality assurance.

Therefore, in this study, as well as in the survey instrument, the researcher would adopt this working definition of ERM by COSO since, as stated by Deck (2015, p. 23), this definition is so comprehensive and encompassing that it caters for six essential elements of ERM: 1) the fact it is initiated and controlled by senior management, 2) needs to be integrated across the whole organisation, 3) deals with risk in a strategic way, 4) provides a guarantee for the achievement of organisation's goals, 5) identifies and forecasts expected risks, and 6) provides a unique way of managing risks based on organisation's risk appetite, which is defined as individuals' or groups' tendency to take risk in a given situation to create opportunities. The UAEU also defines risk appetite as "*the level of risk which an academic (or other) institution is prepared to accept, before action is deemed necessary to reduce it*". In a sense, this definition of ERM has all elements which make it comprehensive and inclusive of all aspects of what effective ERM implementation means. A reading in the literature of ERM shows that a definition of risk management and ERM that is tailored only for the purposes of academia is still missing. However, part of the researcher's objectives in this study is to propose a set of workable guidelines for a more effective ERM framework in the UAE higher education context. By doing so, the parameters of risk management definition as tailored to the academic environment and its unique identity will be reflected. The researcher concluded that in a context such as the UAE, whatever definition is attached to ERM, ERM as a concept should not exist if it does not lead to one or all of the following actual objectives in relation to the academic process: boosting academic effectiveness and excellence, enhancing the overall quality of the higher education sector, and providing practical support for the contribution of higher education for the wellbeing of society in general and for the economy in particular.

2.3.2 Corporate Governance and Internal Controls

To introduce the concepts of "corporate governance" and "internal controls", it is important to state that universities can safely be one form of enterprise. According to Fuller, Beynon, and Pickernell (2017, p. 6), "universities can also be seen to engage in a range of entrepreneurial activities, some viewed as "soft", such as public lectures and consulting, or "hard", such as licensing or spinoff creation". In this sense, one other major conceptual framework component of this study is how HEIs' corporate governance and internal controls play a positive role in the effective adoption and implementation of ERM. In this sense, there is a need to define *corporate governance,* which can be viewed as a framework which combines the set of regulations and practices adopted by an HEI's board of directors or trustees to guarantee their accountability, performance, and quality assurance. According to Chen (2019), corporate governance makes a specific reference "to the set of rules, controls, policies, and resolutions put in place to dictate corporate behavior". Corporate governance is viewed by Liebenberg and Hoyt (2003) as the unification

of certain external factors which affect the adoption and implementation of ERM practices. They also called for the need to enable better risk quantification and analysis. In the UAE, the "top-down approach of governance in the UAE education sector offers a macro-level perspective of the challenges facing the education system. It enables a strategic overview to be possible, through which broad objectives can be proposed." (Warner and Burton 2017, p. 30). Fraser (2014) views the corporate governance role as the outlining factor in defining risk function through obtaining comprehensive information that could well be the basis for further discussions on possible mitigation actions in relation to risks.

Related to the subject of corporate governance, the term *internal control* is crucial in the area of risk management and its relation to quality. Internal control is defined as "a process, affected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: effectiveness and efficiency of operations; reliability of financial reporting; and compliance with applicable laws and regulations." (COSO 2004 Report, Internal Control-Integrated Framework, p. 9). Traditionally, internal control was introduced as an integral model in the perspective of COSO frameworks (2004 and 2017). According to Collier, et al. (2006, pp. 2-3), internal control comprises eight components:

> 1. The internal environment sets the basis for how risk is viewed and the organisational appetite for risk; 2. Organisational objectives must be consistent with risk appetite; 3. Events affecting achievement of objectives must be identified, distinguishing between risks and opportunities; 4. Risk assessment involves the analysis of risks into their likelihood and impact in order to determine how they should be managed; 5. Management then selects risk responses in terms of how risks may be mitigated, transferred or held; 6. Control activities in the form of policies and procedures ensure that risk responses are carried out effectively; 7. Information needs to be captured and communicated as the basis for risk management; 8. The enterprise risk management system should be regularly monitored and evaluated.

Lundquist (2013) concluded that corporate governance and leadership are among the seven categories which represent risk as a concept. By the same token, corporate governance is one of the six groups that categorise risk. According to her, "risk may be represented in seven categories: financial performance and long-term investment value, *corporate governance and leadership*, corporate social responsibility, workplace talents and culture, delivering customer promise, legal and regulatory compliance, and communication and crisis management" (p. 140). She also highlights the link between internal controls and academic leadership and how this bondage is crucial in the process of risk mitigation: "Effective internal controls and timely external disclosure about student outcomes, research productivity, financial performance, and organisational efficiency will become the hallmark of effective university leadership

and will become increasingly critical in mitigating new risks to individual universities and the sector overall" (p. 147).

The significance of internal control systems to effective ERM practice has been the subject of a wide range of recent educational research, such as Teoh1, Lee and Muthuveloo (2017); Beasley, Branson and Hancock (2012); Lundquist (2013 and 2015); and Hillson (2016 and 2019). It is agreed among all such researchers that internal control has been incorporated and integrated into risk management in what is internationally referred to as *contemporary corporate governance*. Additionally, current research in the field, ideally in the years between 2000 and 2019, shows that in multinational organisations, both risk management and internal controls are important elements that govern good corporate governance. Research also shows the inseparable relationship between application of good ERM through internal controls and the achievement of good quality corporate governance.

In higher education context, research has shown that the role corporate governance and internal controls play in the effective implementation of ERM. In this context, effective internal controls help higher education institutions to effectively manage their processes and operations under predefined and solid rules and regulations. "Most ERM programs, particularly in the corporate sector, have their roots in compliance and internal controls" (Lundquist 2015, p. 23). However, non-enterprise factors such as technological advancements and inventions might have their impact on the operations and strategic objectives of such organizations. Recent ERM research (Lundquist 2015, Deck 2015, Hillson, 2016 & 2019) provides that effective internal controls help enhance the overall academic performance and processes, including student achievement, research productivity, financial performance, and organisational efficiency. The UAE CAA (2019, p. 25) confirms that HEIs must ensure their risk management plans are "approved and monitored by the governing body on a regular basis". This gives the clear indication that effective risk management processes must be handled by their governing body of corporate governance which owns the internal controls. The findings of this study provide evidence that solid internal controls always lead to effective academic processes since they help mitigate risks to HEIs in general by handling the top-down decision making. Therefore, in this study, the researcher proposes that internal control will guarantee the achievement of academic performance and effectiveness being one of the most critical operational and strategic objectives of academic organisations through the application of a successful ERM model.

However, recently and more particularly over the past ten years, organisations have started to move into a more solid and robust definition of ERM, through standardizing ERM elements and processes. In 2017,

COSO issued their latest and most important update to the already formalised findings on ERM, in the name of "*Enterprise Risk Management — Integrating with Strategy and Performance"* (COSO.org), which according to COSO.org became "one of the most widely recognised and applied risk management frameworks in the world". This update was introduced to highlight the importance of ERM in strategic planning through the employment of good internal controls.

2.3.3 Organisational Change Elements

In an academic environment, once risk is "defined and identified" institution, and corporate governance internal controls are set up, organisational change factors come to play their vital role in the decision making of ERM implementation. This comes at the core of this study conceptual framework and gives justification to its adoption. Before organisational change is defined, it is worth stating that research of organisational change in higher education is relatively underdeveloped, as has been detailed in the Theoretical Framework section, with individual institutions being the focus of few studies (Farquharson, Sinha and Clarke 2018, p. 150). From a business and corporate perspective, Van de Ven and Poole (1995) provide a solid and all-time applicable definition of organisational change as "a difference in form, quality, or state over time in an organizational entity" (p. 512). Organisational change can be viewed as a significant component of this study conceptual framework, as well as theoretical framework. It addresses the need for organisational change in HEIs. In fact, the whole study conceptual framework of ERM implementation in HEIs is built on the fact that organizational change is mandatory in HEIs should they choose to divert to an effective ERM implementation within their processes. This construct is identified in the study to carry two ways relationship with ERM implementation. In other words, organisational change affects and gets affected by ERM implementation. Therefore, organisational change is an essential pillar for this study conceptual framework since it defines and shapes the factors which impact ERM implementation (Deck 2015, p. 32).

It is commonly accepted that in order for HEIs to effect change in their organisations, they require that their leadership understand the process of change. They also are required to determine whether the HEI is ready for change. It is stated in the COSO (2004), (2017) and (2018) ERM framework updates that an organisation which is looking to expand on its operations into the emerging markets will definitely face more risks in the future for which it may need to dedicate a subject-matter expert in its management panel, board, or executive team. Multiple factors could lead to organisational change which need to be addressed by an organisation leadership, such as mergers and acquisitions which may result in a new facility as well as new operations which do not immediately meet the standards or expectations of an

organization. For these reasons and because it is agreed that HEIs are exemplary forms of those organisations, though unique and detached in their nature, the researcher argues that organisational change is a major conceptual pillar in the higher education ERM implementation research. It is through organizational change that an HEI can create an environment which influences effective ERM implementation. Additionally, this conceptual construct of organizational change definitely involves the internal control element as another major conceptual premise of this study, should HEIs intend to define the level of their risk and therefore effect ERM implementation as an element of organisational change (Deck 2015, p. 32).

Examples of previous research done in support of the importance of organisational change as a major conceptual element of ERM implementation are Deck (2015) within an academic setting; Gates, Nicolas, and Walker's (2012) and Cooper, Faseruk, and Khan's (2013) within a corporate enterprise setting. They all asserted that ERM needs to adapt to the internal control environment and objectives setting processes of an organization in order to contribute to organisational change. They conducted surveys distributed among some companies and academic institutions' risk management executives and concluded that ERM programs, both in academia and enterprise environments, benefit and get improved when relying on the internal control and decision-making conceptual factors which help sustain accountability on the level of HEI organisational management. Adding to the findings in this major ERM conceptual area, Cooper, Faseruk, and Khan (2013) extensively analysed ERM literature and found that organisational change can play both positive and negative roles in the process of ERM implementation. They also paved the way for a late Hillson (2019) understanding that the risk appetite of an organisation can improve the ability to manage risk and effect change.

Therefore, ERM implementation process must go through the essential conceptual parameter of organisational change at an HEI in order to adapt and shape a better risk management philosophy and more learned and aware culture. This will help in the achievement of HEIs' strategic objectives. However, this study establishes that in order for organisational change construct to take full effect in the ERM implementation process, more focus must be placed on the way the academic senior management and risk management executives handle their decision making of ERM implementation.

2.3.4 Decision Making of ERM Implementation and Integration

Decision making is one of the major conceptual elements of this study which defines the process of ERM implementation in HEIs context. In simple terms, ERM itself is defined by some researchers as a process of risk identification, risk analysis and risk evaluation, which is centered around and improves an organization's strategic decision making through the process of both risk and opportunities identification and integration into the strategic planning process (Louisot and Ketcham, 2014). It is an essential component of the COSO (2004 and 2017) ERM framework which defines decision making as a concept in terms of: *identifying* risks, *assessing* them and taking action in *response* to them (see Figure 2.3). According to Baranoff, Harrington and Niehaus (2005), traditional risk management itself is defined within the decision-making process. It is "the process of making and implementing decisions that will minimize the adverse effects of accidental losses on an organization" (p. 15). Lundquist (2015, p. 134) defends the notion that the decision to adopt an ERM model made by shareholders and senior management of HEIs is one that is driven by two factors. The first is the fact that ERM comes as a response to a failure or a mishap, such as a violation of rules and regulations, a financial loss, a scandal or even a small fire at the university IT archive storeroom. The second is the result of directions made by the board or senior leaders at a given academic institution to adopt ERM as a shield to protect the business of their organisation.

Therefore, recent research such as by Deck (2015), Lundquist (2015) and Sithipolvanichgul (2016) showed that ERM is a major resource for academic and organisational leaders to make decisions regarding the risks in their organisations. Decision making also provides leaders with clear guidelines which improve all processes in their organisations. These reasons provide the rationale for the researcher's adoption of decision making as a major conceptual construct of this ERM study.

The COSO framework not only deals with decision making from the perspective of risks but is also based on benefiting from opportunities. This indeed comes in line with the already provided definition of risk which entails both hazards (negative connotations) and opportunities (positive connotations). These two major facets of the decision-making process are indeed necessary for the ERM implementation process. Additionally, one of the unique components and scores of the concept of ERM is the ability of an institution to ensure the board of directors and top management are indeed involved in risk management strategic decision making Sithipolvanichgul (2016, p. 112). These reasons provide the rationale for the researcher's adoption of decision making as a major conceptual construct of this ERM study.

From an academic perspective, Deck (2015) argues that the effectiveness of the academic process relies on solid evaluation of risks based on clear decision making from senior management. In the same context, and from a higher education research perspective, Lundquist (2015) concluded that "in addition to identifying, prioritizing, and responding to institution-wide risks, a growing number of universities are attempting to integrate risk management into their strategic planning and decision-making processes" (pp. 4-5). She also argues that decision making is one of three major aspects of higher education cultural determinants which influence the ERM implementation in higher education context (p. 46). However, establishing ERM decision making does not seem to be as easy as it looks. There are different levels of ERM decision making for the organisation to choose from. From a conceptual perspective which informs the analysis of the topic of this study, those various challenging levels do not introduce themselves as a concern since the ultimate goal of inducing effective ERM implementation is what matters. Measures to take decisions with regards to risks assessment and evaluation may be applied differently through different academic institutions. However, in all cases appropriate assessment and evaluation processes should be in place when dealing with risk based regulatory compliance issues in an attempt to avoid counterproductive responses when intending to take the HEI into a new competitive and more challenging yet rewarding academic and business markets.

2.3.5 Academic Effectiveness and Quality – As an Outcome of ERM Implementation

The conceptual framework of this study assumes that the whole ERM process implies certain practices which include ERM adoption criteria ultimately aiming at improving organizational performance, quality and effectiveness. Given the fact that a basic assumption of this study is that the implementation of ERM would lead to the achievement of effective academic performance practices, as manifested clearly in the adopted Conceptual Framework (Figure 2.3), the researcher would present a definition of what academic effectiveness means within the framework of ERM, corporate governance and quality assurance systems, which should be applicable not only to the context of higher education, but rather to the whole context of ERM research at large. More elaborate analyses of the academic effectiveness concept are presented in the Literature Review section. However, the researcher limits his discussion in this section to defining the term within the higher education ERM literature review context.

The UAE CAA (2019a, p. 17) presents academic effectiveness as part of the quality assurance process, a tool which "benchmarks performance [of a given academic institution] against the best equivalent practices of other local and international institutions". Effectiveness, according to CAA, comes "at the heart" of HEIs' processes and functions. Campbell (2005) argues that Centra (1993) was among the first

researchers to systematically define what effectiveness would mean in the academic context in terms of good performance. According to Centra (1993), academic performance of the academic staff is mainly and predominantly measured by "effectiveness". It will be accepted to assume that academic performance is viewed by many as the means by which faculty administrators and members seek to achieve academic excellence in their corporate and educational processes. In their recent research, Saeed and Saeed (2018) define effective academic performance as a concept encompassing "items included in the class observation form focus on instructor's command level of knowledge and teaching strategies in delivering it effectively" (p 182). According to them, the academic performance of academic staff at HEIs is the key factor to the success of the entire process of teaching and learning at higher education level.

Quality in the boundaries of academic processes seem to be a very tricky and hard to define term. "Quality, like 'freedom' or 'justice' is an elusive concept. We all have an intuitive understanding of what it means but it is often hard to articulate. It is also a relative concept in that it means different things to different people in different contexts and in relation to different purposes" (Harvey, Burrows and Green, 1992, p. 3). In general terms, quality is defined differently in different contexts. Defining quality in the academic context would mean different things in different perspectives. Woodhouse (2012) assumes that at the time "the academic world started to look to the business world for ideas on quality, it started to struggle with what is meant by quality in higher education" (p. 6). In his attempt to account for a working definition of *quality* under the umbrella of UAE CAA, Woodhouse (2012, p. 6) makes an outstanding statement while positing that "as the academic world started to look to the business world for ideas on quality, it started to struggle with what is meant by quality in higher education". However, he argues that the UAE CAA managed to present a solid and brief definition of the term "quality" in that it is always a reference to "*fitness for purpose (FFP)*" (p. 7). He further emphasizes the fact that this definition can be adopted in different organisations and for multiple purposes. In this sense, Woodhouse (2012), defends the notion that this "definition covers all the other contenders, because all of them imply a specific characteristic or goal (i. e. purpose) that should be achieved. It aligns with the quality audit approach and provides an 'organising principle' for approaches to the achievement and checking of quality" (p. 7). This working definition by CAA aligns with their strategic quality audit approach and poses itself as an organising principle for the establishment, achievement and checking of quality in higher education (*ibid.*). More importantly, Abukari and Corner (2010) posit that "Quality is an elusive concept, which assumes different meanings in different contexts and can be controversial sometimes. In many cases multifaceted terms such as effectiveness, efficiency and/or equity are used as synonyms of or to expound on its meaning" (p. 194). Abukari and Corner (2010) further define quality in the context of higher

education as "*a degree to which the best is got from higher education within a given context (local, national, regional, international) taking cognisance of the objective, process and outcome*" (p. 194). In the terms of Murad and Shastri (2010), quality is defined by some researchers as "fitness for use or purpose", and by others as "conformance to standards". In general terms, quality aims at satisfying customers' needs and should maintain the continuous performance of functions as required by customers as per agreed upon standards.

However, in the context of higher education, there are different perspectives for defining quality. Even though some definitions of quality in the context of higher education are not being made directly and would focus mainly on academic stakeholders' accountability and performance (Al Alami *et al*. 2017), others would define quality as a framework to address elements such as performance improvement (Kisuniene, 2004). In their study conducted on UAE HEIs, Soomro and Ahmad (2012) define quality in higher education context more extensively. According to them, "Quality is a relative term meaning different things to different people. Some researchers argue that "quality is fitness for use or purpose" and other believe that it is "conformance to standard", but in general it should satisfy customers' needs, and continuously keeps on performing its functions as required by customers as per agreed upon standards (Murad and Rajesh, 2010)" (p. 148). The authors adopted the conceptualization of Arjomandi, Kestell and Grimshaw (2009) of the educational system in quality perspective as being "a collection of several interdependent sub-systems that interact with each other to accomplish the goals of the systems. This system, as a whole, like other systems also consists of Input – Process – Output" (p. 149).

The conceptual framework adopted by the researcher in this study assumes that academic effectiveness and quality assurance are two major outputs of the whole ERM implementation process. National academic qualifications and accreditation agencies throughout the world, such as the British Accreditation Council (BAC) in the UK and the UAE CAA, endeavour to materialise effectiveness and quality assurance as existing physical departments in their HEI systems for the purpose of enhancing the academic process, student learning and teaching and learning processes. The UAE CAA (2019a, p. 9) for example strongly defended this concept by stating that "Effective operation of the institution's Quality Assurance/Institutional Effectiveness office is ***at the heart*** of this development". Not only this, but also the CAA (2019a, p. 11) argued that quality assurance or programme effectiveness "relates to all other Standards and is at the heart of the Commission's determination to assure and enhance high quality".

2.3.6 Summary of Conceptual Analysis – Conceptual Framework Diagram

Looking into what the successful application of an ERM-based program may do for the effectiveness of the academic process, namely faculty members and instructors' academic performance and quality assurance internal measures, a comprehensive and solid conceptual framework would definitely suggest providing universities instructors, leaders as well as administrators the required experience which will help them to holistically identify and manage their universities' strategic, financial and operational risks. It will also help them better deal with their institutions as a successful enterprise project. However, before conducting the data collection and having gone through extensive literature review on the subject, most importantly Deck (2015), Lundquist (2015), Vandenberg (2017) and Eryilmaz (2018), the researcher proposed an initial conceptual framework to be used as a guide in the data collection and formation of results process:

Table 2.2 – Key Literature driving Proposed Conceptual Framework of the Study

	Literature	***Summary***
1	Scott (2014)	Defining institutional and organisational change elements and how they relate to the conceptual analysis of ERM implementation process as well as research
2	Deck (2015)	Opting for the convenient tools of decision making as well as the right elements of organisational change theory to help produce effectiveness out of ERM implementation and integration
3	Vandenberg (2017)	ERM implementation as an input and output process.
4	Eryilmaz (2018)	ERM implementation and integration and how they relate to academic quality assurance and effectiveness
5	Farquharson, Sinha and Clarke (2018)	The influence of organisational change theory elements on ERM conceptualisation in the unique context of HEIs
6	The CAA (2019a & b)	Academic effectiveness and program quality as an outcome of the ERM implementation and integration process

This proposed conceptual framework helped specifically in the drafting and finalization of the survey instrument as explained in Chapter 3. Therefore, the following Figure 2.3 shows the proposed preliminary conceptual framework based on three linear level conceptual analysis (Adoption – Implementation – Integration) as well as the theoretical framework adopted by the researcher this study:

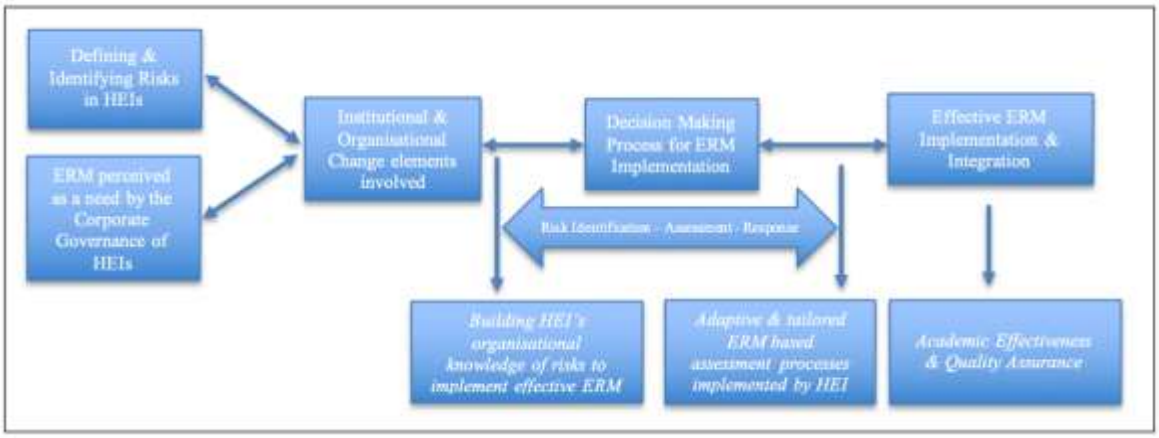


Figure 2.3 – Proposed Preliminary Conceptual Framework

2.4 Review of Related Literature

Eryilmaz (2018, p. 244) argued that "ERM is not a new fad (Fraser et al., 2008) or fashion and its significance would boost in the near future particularly due to the emergence of new types of risk. However, despite these developments, ERM literature is still in infancy … thus, reviews on ERM … in international literature are still only a few". "In contrast to the richness of studies devoted to ERM engagement in small and medium-sized enterprises (SMEs)" (Anton and Nucu 2020, p. 1), studies exploring ERM adoption and implementation in higher education are still few (Perera at *al.* 2020). However, in this study, literature review is limited to a brief account of ERM history and research, the importance of ERM adoption to academic institutions, and the challenges that face universities throughout the implementation of ERM model, as well as the effectiveness it may have in higher education context as perceived and evaluated by academic administrators and faculty instructors. The literature where mixed quantitative and qualitative research has been conducted to identify and explore effective ERM implementation in higher education context and its relation to effective organisational performance is also highlighted and referred to in detail.

2.4.1 Overview of the Development of ERM - The New Religion of Risk Management

No study on risk management will be complete if it has no reference to Bernstein's elaborate work *Against the Gods: The Remarkable Story of Risk* (1998). It is almost impossible to make a full account of Bernstein's 1998 book on the history of risk management, but a summary of his major findings is worth mentioning here. Bernstein (1998) was so adamant in his defense of the significance of risk management to the human history itself, to the extent that he defended the notion that "the quantification of risk defines the boundary between modern times and the rest of history" (p.1). The majority of recent risk management researchers, with David Hillson (or the Risk Doctor) being on top of them, rely on

Bernstein in their historical description and explanation of the term risk management. Dionne (2013) stated that "several sources (Crockford 1982; Harrington and Neihaus 2003; Williams and Heins 1995) date the origin of modern risk management to 1955-1964" (p. 1). However, while prominent risk management researchers agree with Bernstein that modern risk management started right after World War II, and particularly after 1955 (Dionne 2013; Hillson and Murray-Webster 2007; Hillson 2016), they also agree with him that its origins go back to as early as the $16^{th} – 17^{th}$ century Galileo contributions and the 17^{th} century French mathematicians and philosophers Pascal and Fermat, through their discovery of and elaboration on the Theory of Probability, which came as a result of their attempts to resolve the famous Problem of Points (Bernstein 1998). Twentieth century studies of risk management are indebted greatly to this Theory and to the related 18^{th} and 19^{th} centuries theories of insurance and probability ventures. An elaborated analysis of the Theory of Probability and its relationship to ERM is provided in the next section of this study.

A more detailed and comprehensive overview of risk management history was introduced by Dionne (2013) and Walker and Shenkir (2018). According to them, risk management in the twentieth century began as an isolated discipline and had long been associated with the concept of *insurance* alone. It is only recently, beginning in the 1990s, that risk management was identified as a corporate function that encompasses all areas of an institution. Additionally, Harrington and Niehaus (2003) found that risk management has also been long associated with the use of market insurance to protect individuals and companies from various losses associated with accidents. In a word, both Dionne (2013) and Harrington and Niehaus (2003) argued that risk management was long being jailed behind the limitation bars of enterprise insurance throughout the 1950s, 1960s and 1970s. It was until the 1980s that private businesses began to apply risk management into their financial records and management, in addition to their insurance portfolios, giving birth to a new dimension of risk management that would involve more serious studies to quantify and evaluate losses and profits for businesses not only in Europe, but around the world. Finally, both Dionne (2013) and Hillson (2016) defend the notion that it was until the 1990s that the world began to witness the birth of systematic international enterprise risk management regulations developed by financial and business institutions worldwide as a means to guard them against unexpected risks and mitigate potential capital, financial and profit losses.

It was then when the world started to view a fresh human discipline whose origins go back to the Renaissance and Galileo times when the human mind began to resist the conventional and aspire to what became in the late twentieth century the "new religion of risk management", to borrow Bernstein's (1998)

terminology. Walker and Shenkir (2018) also agree that "approaching risk from an enterprise-wide perspective began to be considered and implemented in the 1990s" (p. 5). Their summary of depicting the history of ERM evolution throughout the last three decades of the 20th century is represented in their argument that it ranged from focus on pure financial hazards and credit loss into the current strategic, operational, and financial holistic approach of ERM.

Figure 2.4 – Evolution of Risk Management (Adopted from Walker and Shenkir 2018, p. 6)

2.4.2 The Origin of Risk Management (Pascal's Probability Theory)

As stated in the Conceptual Analysis Section, according to Šotić and Rajić (2015, p. 19), the Risk Management Vocabulary 2002 introduced the definition of risk as "*a combination of the probability and scope of the consequences*" (p. 19). Pascal's *Theory of Probability* is the theory which studies factors determining the link between probability of events and their consequences (Drucker, 1964; Bernstein, 1998). This is exactly what shapes the identity of risk management as we see it in recent studies, both business and academic. It is worth mentioning that the concept of risk management came to existence "during the Renaissance with the inception of probability theory" (Lundquist 2015, p. 14). In this sense and related to the subject of risk management as an emerging concept and how it came to evolution in the way researchers and practitioners experience it now, Pascal's theory of probability is an important theoretical aspect which gave seeds to later risk management studies. The basic component of Pascal's Theory of Probability is what is known as the "*laws of probability*". As stated earlier also, the majority of nowadays risk management historians and experts trace back the origins of modern risk management as a discipline to this theory (Edirimanna 2019; Hillson 2016 and 2019). "A Mathematician, Physicist and Thinker about God", Blaise Pascal is one of the most famous and renowned philosophers, scientists and mathematicians of all time (Adamson 1995). To further define this theory, there is a need to identify how it started in the first place. Cooper and Grinder (2009, p. 10) stated that through his attempts to solve a long-standing mathematical probability problem which puzzled scientists and mathematicians: the

"Problem of Points", Pascal resorted to his compatriot the French Pierre de Fermat, one of the first pioneer mathematicians in the world, to resolve the probability issue and find a solution. According to Drucker (1964, p. 17), "three French men, Blaise Pascal, Pierre de Fermat and Chevalier de Mere made immense contributions to the development of probability theory. When Chevalier raised the problem of how to divide the stakes in an unfinished game of cards, Fermat turned to algebra while Pascal used a combination of geometry and algebra. Pascal's work later evolved into decision theory". However, to be fair with history, it was only Pascal who contributed scientifically dramatically to the Probability Theory.

Bernstein (1998) defines the word "probability" in the risk management context by tracking it back to its Latin root. "The Latin root of probability is a combination of *probare*, which means to test, to prove, or to approve, and *ilis*, which means able to be" (p. 48). The renowned and most learned sixteenth century Italian astronomer and physicist Galileo himself made explicit use of the term *probabilitá*. One of the most interesting notions of identifying risk management studies or research within the Theory of Probability is that, according to Bernstein (1998), the word carries a double meaning, with one looking into the future and another on the past or what has already been known or achieved. This meaning in itself is the outlining definition of risk management as a process of decision-making as extensively accounted for by Hillson and Murray-Webster (2007), with such distinction between what has already been approved or accomplished within an institution and what yet to be decided to be done. This was exactly the understanding provided to us about the Theory of Probability by Canadian philosopher Ian Hacking and his definition of probability as something like "worthy of approbation" (Bernstein 1998, p. 48).

The theory studies factors determining the relationship between probability of events and their consequences (Drucker, 1964; Bernstein, 1998). Studies made by Drucker (1964), Bernstein (1998), Hillson and Murray-Webster (2007), Cooper and Grinder (2009), and Hillson (2016 and 2019) will be accounted for when explaining the theory and how it is related to ERM history and research. Therefore, an overview of ERM development in the context of higher education is potentially associated with the notion of how recent reforms in the area of risk management have been identified as a result of considerable and radical developments in the processes, operations and structures of higher education. According to Abukari and Corner (2010, p. 191), the context of higher education and how HEIs function have witnessed considerable changes over the last two decades. "These changes present major challenges to higher education as a whole and have led some universities, particularly those in the more developed

countries, to transform (Abukari, 2010)". This brings up the notion of how organisational and structural reforms in higher education, like most other sectors, necessitated a way of reform in the way HEIs look into ERM and its implementation. It was confirmed by research that the development of ERM implementation in higher education came to reflect the organisational changes and reforms identified in higher education (Deck 2015, p. 121).

In this study, the more advanced form of probability theory has been demonstrated in terms of decision-making, being one of the major constructs of the study conceptual framework. It seems interesting to posit that the origins of this major component of the ERM implementation process can be traced back to Pascal's Theory of Probability. However, recent reforms in the higher education sector sustained the claim that the last few decades starting from 2000 necessitated the need for a more advanced and business-like tailored form of risk management. Therefore, an account of literature of ERM would by no means be complete if reference is not made to the internationally accepted and accredited ISO principles and guidelines adopted in the subject, as well as the COSO risk management framework.

2.4.3 Risk Management formalised through ISO and COSO

The Concept of risk and risk management in relation to ISO 31000:2018 and COSO 2017

When dealing with risk management from a corporate governance perspective, "ISO 31000 and COSO are the two best-known standards" to be adopted while addressing risk issues (Becher 2019). Universally, in an uncertain world where there is always the chance that organisations will not achieve their expected outcomes, such organisations, whether private or public, are advised to utilize ISO 31000 and COSO standards. These standards help them make the right decisions and achieve their strategic goals. This can be done through either applying these standards individually, or together, or even through applying different standards. These two standards help organizations and institutions take the right steps and decisions, not only to prevent adversities, but rather to flourish and succeed, thus covering both aspects of risks. Based on the review of ERM frameworks of COSO and ISO 31000:2018, one can notice that *risk governance, risk policy, risk identification, risk analysis, risk evaluation, and monitoring and review of risk management process, tools and technology, and continuous improvement of the risk management practices,* can all be proposed for HEIs. The review of these frameworks also shows that organizations that have implemented systematic risk management practices are enjoying high levels of organizational performance effectiveness. However, as stated before in the Problem Statement of the study, and as per the guidelines of COSO and ISO, some empirical research efforts still need to be done to link the implementation of risk management practices and the impact on the institutional performance.

According to the standards and guidelines set in the MS ISO 2010, risk is defined as "effect of uncertainty on objectives and it aids decision making by taking account of uncertainty and its effect on achieving objectives and assessing the need for any action" (MSISO 31000:2010, p. 23). Additionally, the same standard and guidelines refer to risk management as the culture, processes and structures that aim at capturing more opportunities while at the same time manage adverse effects. Beasley, Branson and Hancock (2012) defend the notion that, through the application of COSO, ERM can be implemented as a process to identify required actions which might affect an organisation and manage risks which will then enable its leaders to achieve their entity objectives. In the context of higher education, ERM is viewed as an academically designed management process which can be strategically applied across the institution. It is also designed to define potential actions and requirements which may affect the institution's processes, either positively or negatively. This implementation of ERM will therefore contribute to the achievement of a HEI's mission, as well as fulfillment of its key performance indicators (KPIs) and goals.

2.4.4 ISO 31000:2018 Risk Management

In November 2009, the Geneva-based ISO Board issued their first version of the ISO 31000, introducing their first version of "*Risk Management – Principles and Guidelines*", the purpose of which was and is still to provide principles and generic guidelines on corporate risk management. John Shortreed, in his talk at the 2008 International Risk Management Conference in Toronto, noted that the new ISO 31000 standard "targets the quality of an organization's management and suggests risk management frameworks, processes, and activities that should be followed to help organisations better achieve their objectives". Risks, according to him, have their powerful impacts on organisations, which can have their consequences both financially and professionally, not to mention the environmental, safety and social outcomes. As a result, managing risk effectively in any organisation would definitely help conceive better achievements in an environment full of uncertainties.

The year 2018 came to witness an updated, revised and enhanced ISO 31000, focusing on strategic planning and quality of organisations. The *"ISO 31000: 2018 Risk management – Guidelines"* makes an account for all required eleven (11) principles, framework, and standards; and paves the way for a solid and defined process for managing risks. ISO 31000 is a standardization tool which can be applied by any organization no matter how big or small it is, or what business or industry it runs. According to ISO.org, implementing ISO 31000 helps organisations achieve their objectives, enhance their ability to find opportunities and threats as well as allocate and make use of effective resources for risk treatment.

However, it is understood and generally accepted that ISO 31000 cannot be used for certification purposes. Organisations usually use IOS 31000 to help them obtain guidance for internal or external audit programmes on their risk management procedures and policies. Organisations which make use of ISO 31000 are able to compare their risk management practices with an internationally recognised benchmark, which enables them to adopt ideal principles for effective management and healthy corporate governance. In this sense, there is no reason why academic institutions in the UAE, for example, would not adopt the ISO 31000 Guidelines in their corporate governance to enhance their academic, leadership and educational processes.

2.4.5 Control and the Risk Management COSO Framework

What Does COSO Stand For?

In addition to ISO 31000, making a reference to the COSO ERM framework poses itself as a necessity in this study. In 1992, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) established an evaluation model which targeted internal controls of organisations. Organisations which plan on building effective internal controls in their management and leadership systems would adopt this model since, according to COSO.org, this model is a universally accepted framework, recognised as being a solid defined standard against which organisations measure their systems of internal control effectiveness. The COSO framework helped transform conceptualisation of ERM and indulging it into the golden standard of corporate governance practices, such framework "which has become a worldwide template for ERM" (Blaskovich and Taylor 2011, p. 1).

2.4.4.1 What is the COSO 2004 ERM Framework (Updated in 2017) and why is important to university leaders?

The COSO model identified internal control as a "process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance of the achievement of objectives in the following categories: - Effectiveness and efficiency of operations; - Reliability of financial reporting; - Compliance with applicable laws and regulations". According to COSO, in order to achieve an "effective" internal control system, five components need to be adopted and implemented in order to achieve the objectives of a given organisation: namely, control environment, risk assessment, control activities, information and communication, and finally monitoring. These components are the major pillars for establishing a robust internal control within any given entity. Since academic organisational effectiveness and performance are at the core of this study, it is interesting to learn how COSO adopts the notion that sound internal control can best be achieved through good and directed leadership practices. COSO standards are a powerful resource for the conceptual analysis of this study

through the researcher's introduction of "organisational change" as a major construct which has two ways relationship with ERM implementation. These standards also help researchers identify and assess the various risks facing an HEI, at all levels, and within all functions from an ideal organisational perspective. It is through the design of active and effective internal control activities that academic leaders are able to address and mitigate the significant risks identified in their academic organisations and processes. The level of information sharing in relation to risk identification and assessment in order to achieve the business and academic objectives of an academic institution is thought to be ideally communicated through up-down-and-across the board channels. Through this model, leaders in universities will be able to continuously monitor the entire system of internal control and therefore address their issues in a timely manner.

2.4.4.2 2017 Enterprise Risk Management – COSO Integrated Framework

In 2017, COSO updated their risk management and internal control frameworks to the ***Enterprise Risk Management — Integrated Framework,*** to further address the development and implementation of ERM in given organisations. The updated Framework also provides an account which aims at enhancing risk management approaches and meeting the demands of a developing business environment. What makes this update important is the fact that it features the significance of "considering risk in both the strategy-setting process and in driving performance" (COSO 2017a, p. iii). Hence the importance of making a reference to the COSO 2017 Framework in this study. In COSO's own terms, the framework helps sustain and improve organisational performance, and in this sense there is no reason why it would not impact the academic performance of faculty members and administrators.

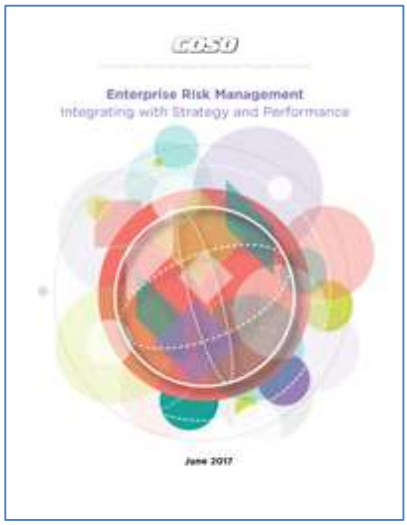


Figure 2.5 – Enterprise Risk Management – Integrating with Strategy and Performance (Adopted from COSO 2017)

The COSO 2017 Integrated Framework makes a crucial reference to the objective-setting process which all corporate organisations must adopt in order to establish their strategic objectives. This, according to COSO (2017a), comes as the major and crucial factor in the risk management and evaluation process. In other words, this Framework defines risks as being associated with strategic objectives which will then need to be assessed and made use of as the basis for measuring risk in their different operational, reporting and compliance areas. This research avails from the undisputed clarity of COSO 2017 Integrated

Framework in defining a corresponding conceptual framework for an integrated and effective risk management implementation process. The Framework helps identify risks in each organisational management area and assess them based on a given organization's "*risk appetite and tolerance*" (COSO, 2017a). In this regard, Louisot and Ketcham (2014) posited that ERM helps improve the strategic decision-making process of an organization through the integration of risks and opportunities into the strategic planning process. To help this process, COSO (2017a) emphasizes the great importance of defining and sustaining risk management objectives for each organizational level.

2.4.6 Comparing the ISO 31000 and the proposed COSO ERM

By reviewing the components of risk management definition and analysis through both ISO and COSO, it would be concluded that both ISO and COSO are serious formalised endeavours with the intention to depart from the traditional risk management analyses. Gjerdrum and Peter (2014) conducted a simple though comprehensive comparison between the original 2009 ISO 31000 and 2004 COSO ERM Framework. They argue that even though traditional risk management had proven to be effective and efficient in dealing with risks in order to ensure profitability and efficiency, organisations had started to think of new updated ways to tackle their hazards. According to Gjerdrum and Peter (2014), organisations developed their processes from the traditionally based hazard and uncertainty management analyses towards the more integrated and encompassing risk management approaches. Through the adoption of ISO and COSO guidelines and frameworks, such new approaches have been adopted to simplify the implementation of risk mitigation measures, including emergency planning, contingency management, scenario planning and disaster preparation.

With the exception of banking and insurance industries, ISO and COSO or either of them are the most widely used frameworks by risk management practitioners (Gjerdrum and Peter 2014; Rubino 2018; Edirimanna 2019; Perera *et al*. 2020). Given the fact that both frameworks have several guiding principles in common, it is widely accepted that they should intermingle in a way to better integrate risk management with a corporate's strategy and governance. Risk practitioners in general and risk management owners in HEIs will definitely avail themselves from coining a unified terminology and a common set of risk principles to rely on. The whole idea behind ISO and COSO guidelines and frameworks is the need for a simple and comprehensive framework which would help eliminate inconsistencies, uncertainties and ambiguities across corporate organizations and academic institutions alike. Gjerdrum and Peter (2014) argue that an awareness of the differences between ISO and COSO would help overcome and mitigate the weaknesses in the process of identifying both strategic and

operative risks. The 2014 project announced by COSO to update their risk management framework was aimed at making an account for the development of risk management theories and practices over the last decade starting from 2010. As stated earlier in this study, it was in 2017 when COSO managed to publish to the public their revised ERM integrated framework. The elements of COSO integrated framework correspond to ISO in the sense that the relationship between ERM and decision-making are made more explicit. Additionally, the release in 2010 by the Institute of Internal Auditors (IIA) of the "*Practice Guide - Assessing the Adequacy of Risk Management using ISO 31000"* helped organisations to choose the framework which better met their needs, philosophy and resources.

2.4.7 Implementation of Risk Management Framework form ISO and COSO Perspectives:

Edirimanna (2019) stated that "the implementation of an ERM framework is the best tool for an entity as ERM facilitates the management for the selection of the most suitable strategy to their entity analyzing the risk factors aligning with resources with the mission and the vision of the entity in running the business successfully means the selection of correct choices and accepting trade-offs (COSO, 2017)" (p. 212). In this context, a review on ERM implementation in service industry indicated that COSO integrated framework of risk management (COSO, 2004) and the previously IS0 31000:2009, now ISO 31000:2018, are widely employed by service firms (URMIA 2007, 2016 and 2018). These frameworks of risk management describe principles, practices, generic guidelines and processes involved in managing risks. ERM is capable of unifying concerted effort and risk management practices to establish risk context and parameter, identify risks, analyse the risk and develop the profile for the risks, and determine risk treatment strategy. However, a tested model of risk management through academic research and procedures for higher education is still not existing. Analysis on the usage of COSO (2004), IS0 31000:2009, AS/NZS 31000:2009 and MS ISO 31000:2010, contributed to the development of the risk management practices in higher education.

Speaking of implementation of risk management framework form ISO and COSO perspectives, Kwak and Stoddard (2004) assumed that standardization of risk management should be enforced so that managements are able to apply risk management in their organisations. Therefore, according to them COSO and ISO set the ideal risk management standards which may allow for a solid framework to manage risks which impact such organisations. In other words, based on the review of ISO and COSO standards, the risk management framework provided for by risk management practices should include risk governance, risk policy, risk context, risk identification, risk analysis, risk evaluation, risk treatment, communication and consultation, and monitoring and review of risk management process, tools and

technology, and continuous improvement. Kwak and Stoddard (2004) argue that risk management tools have been coined to implement convenient risk management practices and increasing success.

2.4.8 Benefits of Effective Enterprise Risk Management as per COSO 2017 ERM Framework

In the view of COSO ERM Framework (2017) all institutions require a defined strategy which they need to periodically adjust. This strategy must be in line with the continuously changing opportunities surrounding the organisation and must bring both value and profitability to it. According to COSO (2017a), ERM is the ideal possible framework which enables stakeholders in a given organisation to optimize their strategic objectives and boost their performance effectiveness. COSO (2017a) provides a list of benefits which organizations can gain when they integrate ERM into their corporate body:

- ***Increase the range of opportunities***: Through taking all possibilities into account, whether indicating positive and negative aspects of risk. New opportunities can always be identified with the identification of risks.
- ***Identify and manage risk entity-wide***: Institutions need to handle entity-wide risk identification and management to enhance and sustain performance.
- ***Increase positive outcomes and advantage while reducing negative surprises***: ERM gives institutions the opportunity to improve their risk identification and risk responses and therefore minimise and eliminate unwanted surprises.
- ***Reduce performance variability***: ERM allows institutions to plan in a way which helps them recognise risks which affect performance and therefore set up appropriate action plans needed to reduce negative impacts and maximise positive opportunities and benefits.
- ***Improve resource deployment***: Assessment of resource needs, requirements and allocation can best be done through obtaining solid information on risk. This allows management to make better planning which will help improve resource deployment in the face of risks.
- ***Enhance enterprise resilience***: One of the major theoretical components of this study is institutional or organisational change. An organisation's survivability and development rely heavily on its ability to forecast changes and make good planning for them. In the same token, an organisation, according to COSO, not only must aim at surviving but also at evolving and thriving. This can best be conducted through effective ERM, which according to the study conceptual analysis and theoretical framework is a major contributor to and consequence of organisational change.

These benefits come in line with the major philosophical premise around which several researchers built their approach to risk management analyses and evaluation, most importantly Hillson (2012; 2016; 2019); Beasley, Branson and Hancock (2012); Walker and Shenkir (2018). These benefits sustain the argument that risk should not be seen only negatively as posing a potential obstacle or challenge to setting and carrying out a strategy. It must be always viewed from the perspective of its upsides and positive outcomes. In this sense, ERM is the means to positive organisational change which underlies the strategic objective of organizational responses to risk and definitely gives rise to strategic beneficial opportunities and potential capabilities.

Lermack (2008) noted the significance and benefits of effective ERM in that it became the *industry standard* for risk management. He stated that "during the first decade of the 21st century, ERM has become identified as a best management practice for organisations of all types, including for-profit financial and non-financial organisations, non-profits, universities and government organisations" (Lundquist 2013, p. 145).

2.4.9 Aspects of ERM Implementation in the context of HEIs

Why is Risk Management important in higher education? It is through tracing the history of risk management that we learn that in the twentieth century risk management began as an isolated discipline and had long been associated with the concept of insurance and financial sectors alone. It is only recently, beginning in the 1990s, that risk management was identified to be a corporate function which encompasses all areas of an institution, including higher education institutions. HEIs started to conceive a better and more solid risk identification process, and therefore effect ERM implementation as an essential element of organisational change (Deck 2015, p. 32). In their comprehensive literature review of ERM implementation in higher education, Perera et al. (2020, p. 156) argued that traditional risk management has no longer been the solution to HEIs:

> "It has been identified the poor practices of Traditional Risk Management (TRM) approach were the main courses for the recent global crises (Sithipolvanichgul, 2016). It is advocated that a proper risk management solution is needed to resolve problems and challenges faced by businesses in this dynamic work settings. Under this situation, Enterprise Risk Management (ERM) has emerged as an effective solution to safeguard businesses from the possible disasters and optimizing the value of the firm enhancing the benefits for stakeholders."

"Risk management is [therefore] so important because it enables institutions to potentially avert crises and lessen the impact of those that do occur" (Vandenberg 2017). Raanan (2009, p. 55) argues that "as the academic world is going through a period of unprecedented change, it must also adopt advanced,

state of the art management methods, approaches and techniques." He also confirms that "there is no reason why these institutions cannot adopt a management tool which is relatively easy to deploy, inexpensive, and has the potential of improving management's performance quickly – the tool of risk management" (p. 55). The importance risk management and risk-management-based approaches have on UAE HEIs in specific have been cited by few recent educational and risk management researchers (El-Refae and Belarbi 2015; Al-Jundi and Ahmad 2016). Al Jundi and Ahmad (2016) make it very clear why risk management as a model is essential for UAE HEIs: "According to the UAE Commission for Academic Accreditation (CAA), Ministry of Higher Education and Scientific Research, any proposal for the accreditation of any program, should demonstrate awareness of risks of all aspects of the initiation of the program and its delivery. So, it is necessary for any higher educational institute, before applying for any program accreditation to have a concrete process for managing the risk (CAA, 2011)" (p. 68). Therefore, one of the most important reasons why risk management is important in the UAE higher education context is the requirement for a specific rigid model of accreditation and assessment as was first presented in the first section of this study.

As well stated by Rubino (2018, p. 203), "the relevance of the role played by the ERM is widely recognized by the academic (Jensen, 1993; Spira and Page, 2003; Power, 2004; Rubino and Vitolla, 2012a; Mikes and Kaplan, 2014) and professional literature (COSO, 1992, 2004 and 2017; ISACA, 2012 and 2013)". Even though during the first decade of the 21st century, risk management was not addressed in the context of academic or higher education context (Hargreaves 2008; Raanan 2009; Rubino 2018; Hillson 2019), a good deal of literature dealing with risk management and its effects in the higher education context has started to show up in the education field only over the past two decades (Cassidy *et al.* 2001; Helshoot and Jong 2006; Austin *et al.* 2013; Beneke 2011; Hommel and King 2013; Lundquist 2013 and 2015; Bin Md. *et al.* 2014; Sum and Saad 2017; Vandenberg 2017; Deloitte 2019). The traditional risk management literature in higher education context provides for several approaches to manage uncertainty, or risk, in large-scale organisations, institutions or universities, "with a focus on minimizing cost and schedule overruns" (Moore and Shangraw 2011, p. 2). Hargreaves (2008) suggests that universities started to at least assume the minimal risk of curriculum designing. He advocated approaching the curriculum design within a measured and careful mode of risk. In so many examples of higher education institutions, risk management was not taken seriously (Raanan, 2009). At that time, it was found also by Raanan (2009) that only a few researchers such as Watson (2004), Menoni (2006), Graven (2007) and Gabel (2008) investigated risk management issues in higher education.

All fields that require a corporate governance and management would definitely face risks of some kind in their processes, which as stated before in this study would entail going through different levels of uncertainties. The importance of risk management in higher education was investigated by David Hillson, or as universally known as ***the Risk Doctor***, more than anyone else in the field. In the Risk Doctor website, Hillson is introduced as "an international thought-leader in risk management, with a global reputation as an excellent speaker and award-winning author. Hillson (2016) highlights the importance of ERM as "an essential tool in helping to bring more understanding of those risks; it enables the organization to be more prepared, more resilient to change and more ready to minimize threats and to seize opportunities." (p. 15). Additionally, Kumar (2016) argues that there are eight factors that determine the importance of ERM as a discipline in general:

> "*1) Regulatory developments [Basel I and II, COSO Commission, Cadbury Code 1992, Australia/New Zealand (AS/NZS) Risk Management Standard of 1995 which as updated in 1998, Sarbanes – Oxley Act of 2002, SEC added requirements in 2010, Dodd-Frank Wall Street Reform and Consumer Protection Act 2009-2010]; 2) Rating agency views; 3) The COSO Report; 4) Basel; 5) Economic Capital; 6) Conglomerates; 7) Convergence of financial products, markets, globalization; 8) Board attention due to public's demands for certain assurances*."

Additionally, Kumar (2016, p. 89) argues that "the top-level elements of enterprise excellence are growth strategy and risk management" The reason why risk management is so important now is because of the myriad of issues that have changed over the past few years. Serving in higher education institutions for quite some time would tell of how different it is now. What is different now is there is much less margin of error for institutions and a greater opportunity for something wrong to happen. There is a general discussion nowadays that the business model in higher education may not be sustainable for a lot of institutions having a handle on what things or occurrences could happen that could derail institutions is more important now than it was probably ten years ago. Therefore, the things that could change for an academic or educational institution that can really put it in peril as the studies show shook a lot of institutions to their foundation. Competition now and who is looking for our students is very different now than it used to be before. Therefore, boards need to be more engaged in looking on the horizon with the institution on what sorts of things could derail its plans.

On its website, Deloitte lists five categories of higher education risks which provide justifications for ERM adoption in HEIs: "Business model risks, reputation risks, operating model risks, enrollment supply risks, and compliance risks". According to Deloitte.com "these risks begin to show why the higher education sector has been steadily investing in the people, systems, and capabilities to survive in the new

normal of perpetual discomfort. According to Deloitte.com, taking an enterprise approach to risk management for universities can be more proactive and prepared avoiding, accepting, mitigating, sharing, or exploiting risk where possible, or responding to higher education issues and challenges more effectively when they arise. As such, higher education institutions, in the view of Deloitte, are under increasing pressure from government authorities, the public, and members of the universities communities to manage risks.

In summary, in the early 21st century years most of the academic works and research on risk management covered only profit organizations or businesses, not universities. In this sense, the greater the uncertainty, the greater the risk. Since risk is everywhere, there is a need for risk management everywhere, but we need to start by identifying it. Crane et al. (2013) argue that the first step in the risk management process is to identify and classify the potential risks. As concluded by Hillson (2016), because there is no doubt risk is present and recognized as inevitable and unavoidable in every lane of the human venture, so there is an equal need to handle risk in the best possible manner.

2.4.10 Aspects of ERM Adoption in Higher Education Institutions

As stated in the Introduction section of the study, the main aim of this study is to investigate and analyse perceptions surrounding the effectiveness of ERM implementation in HEIs. However, it is repetitively asserted in this study that HEIs have their own unique identity which make them different from other businesses in the way they perceive and conceive changes and new practices. As introduced earlier in Chapter 1, ERM literature has provided factors that distinguish HEIs from other for-profit or enterprise organisations. These factors, according to Birnbaum (1988), Deck (2015) and Lundquist (2015), mainly include the ambiguous and undefined nature of their goals caused by the three-fold nature of their missions comprising of teaching, research, and service. No other organisation outside the academia would combine the three elements together in their corporate governance. These factors also include the fact that due to the lack of homogeneity and corporate agreement among the different functions of HEIs' organisational charts, causing conflict of interests among their academic administrators and faculty members. This leads to problematic decentralised decision-making that hinders the decision of ERM adoption in the first place. Therefore, Lundquist (2015, p. 149) concluded that "the culture of higher education is unique, making the introduction of the more corporate aspects of ERM into the decentralized, shared governance structure of IHEs problematic". Deck (2015, p. 53) defends this notion since he argues that "within the context of HEIs, the impetus to adopt new business practices differs from those of private businesses". In this regard, this study assumes that a form of ERM or risk management

is being, or at least should be, adopted by an HEI as an effective management and decision-making instrument. Some recent educational researchers view the adoption of ERM in HEIs as a requirement and defend it based on organisational change and institutional theoretical and empirical perspectives (Lindquist 2013 and 2015; Deck 2015). This study touches on some of the already established ERM models and concepts and see how they have been adapted to academic institutions. Deck (2015, p. 48) based his research around the notion that "HEIs must manage a diverse set of risks that require different means to assess and control. Moreover, individual backgrounds and perceptions on risks and the organizational environment influences how an HEI evaluates and responds to risk".

One of the most prominent studies conducted in the area of ERM adoption in HEIs is by Huber and Rothstein's (2013). The study they conducted in a university setting explained the reasons why HEIs would or should adopt ERM. These reasons include 1) their willingness to manage organizational complexity, 2) to meet the demands of their respective government to justify decisions on risk, and 3) to account for social and political prerequisites for accountability. However, over the past few years beginning of 2010, a myriad of studies has been conducted to cover the existence, implementation and feasibility of ERM in higher education. Berge (2010) argues that all academic institutions are subject to exposure of different types of risks. Therefore, this necessitates the need for a solid risk management plan. The management panel in any academic institution must endeavor to explore their risks and provide an estimation of their solutions and management.

Hillson (2003) concluded that, in terms of risk, all institutions are defined as projects whose successfully execution and completion rely not only on defined Work Breakdown Structures (WBS), known to the enterprise project management experts, but also on the basis of Risk Breakdown Structure (RBS). Risks in projects need to be controlled and managed in what Hillson (2003, p. 87) calls RBS, which he defines as "A source-oriented grouping of risks that organises and defines the total risk exposure of the project or business. Each descending level represents an increasingly detailed definition of sources of risk" (p. 87). For universities, such as in the UAE context, it is generally accepted that different formats and models of risk management adoption can be found which suit each given university's corporate governance structure and academic and enterprise mission. RBS, however, can be utilised by UAE HEIs for the benefit of boosting their academic processes and performance, but evidence to implementation of RBS is not found. However, and as stated by Hillson (2003), "it is therefore necessary for any organisation wishing to use the RBS as an aid to its risk management to develop its own tailored RBS" (pp. 89-90). He also concluded that "RBS is a powerful aid to risk identification, assessment and

reporting, and the ability to roll-up or drill-down to the appropriate level provides new insights into overall risk exposure" (p. 95). In this sense, therefore, applying a specific model for ERM in HEIs is not really the issue, but it is how applicable and feasible such a model is and how fruitful and effective it is. It is only through a defined risk management structure, such as the example of RBS, that administrators and stakeholders of UAE HEIs can not only understand and manage their risks but also take benefit out of them and use them as the basis for their assessment and evaluation processes.

In her study, Lundquist (2015) adopts a general conceptual framework that would demonstrate possible areas of adoption of ERM into higher education and would ideally suit not only higher education institutions in the US, but in many other countries in the world. She based her conceptual framework of ERM adoption on a maturity level ranging from formation, moving to development, establishment and finally reaching into integration.

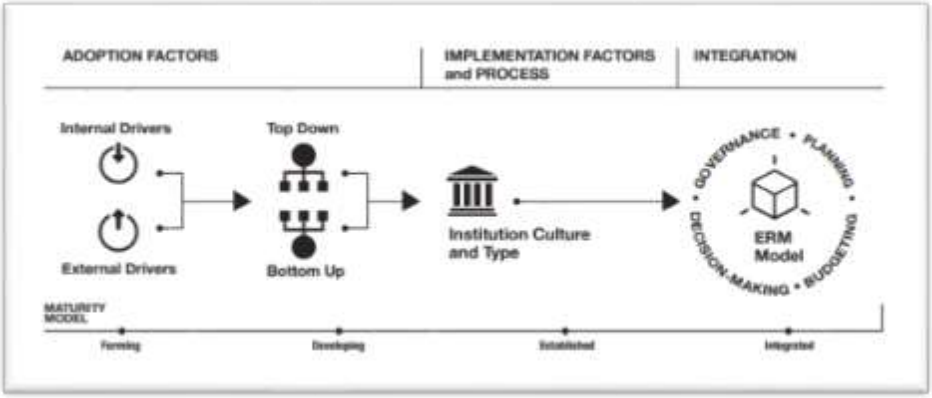


Figure 2.6 – ERM Conceptual Framework (Adopted from Lundquist 2015, p. 10)

However, Lundquist's conceptual framework of ERM adoption seems justifiably simplistic and would tend to change according to the culture, politics and setting of the targeted academic institution. Internationally acknowledged aspects of HEIs' adoption of ERM are extensively made reference to by Lundquist (2013). In her presentation of the experience of HEIs in England (Referring to the Quality Assurance Agency /QAA of the UK), she makes a reference to the risk management framework mandated by the HEFCE back in 2000. Additionally, she points out to the Australia case, where an HEI "must provide a statement from the governing body about its primary responsibilities, including risk management" if that HEI is willing to receive government funding (p. 147). Lundquist (2013) further states that all Australian universities have some type of ERM process being implemented. A third example provided by Lundquist (2013) is the United States of America. United States HEIs are required to exert some risk management efforts and adopt some ERM programs as a requirement by accrediting agencies or even by the federal government. *The State of ERM Report 2008* by the Risk Management

and Insurance Society (RIMS) suggested that "new government regulation formally enforcing enterprise risk management [for higher education] can be expected" (p. 147). Lundquist (2013) also argues that rating agencies started to pay more attention to risk management and governance issues in higher education. From the researcher's reading of the research done in the topic in the UAE, similar findings can be drawn. For example, Al-Jundi and Ahmad (2016, p. 69) defended the statement that "it is crucial to consider the risk that is an inherent part of market activity. Consequently, risk analysis and identification of remedies to minimize them are a couple of the pressing problems of today".

However, in the UAE, few if any studies have been conducted to the effect of examining the implementation of more sophisticated models of ERM in higher education and how they could contribute to the quality of HEIs academic processes. Examples are El-Refae and Belarbi (2015) and Al-Jundi and Ahmad (2016). El-Refae and Belarbi (2015) managed to develop a working risk management model at Al-Ain University of Science and Technology (AAU). They relied on the CAA (2019a & 2019b) Standards in their adoption of this model. In doing so, they found that the CAA Standards can be utilised as suitable guidelines to control the governance of all academics and non-academic units of the Al Ain University (AAU). In a similar manner, Al-Jundi and Ahmad (2016) worked on a risk management model in the AAU, justifying their action by the statement that "so far none of the authors has taken up this in the perspective of UAE higher education institutions" (p. 68). Additionally, in the UAE, higher education ERM research has been limited to HEIs corporate governance and its relationship to the implementation of ERM as a systematic top-down corporate centered process. Examples are Mansour (2009), Al-Jundi (2012), Soomro and Ahmad (2012), El-Refae and Belarbi (2015), and Warner and Burton (2017), CAA (2019a and 2019b), and CAA (2020). All these studies have used small samples or relied on a case study research approach to understand risk management as an organizational practice and model within a limited institutional context. They did not focus on ERM as an effective and essential process which provides solutions, not only to the risks identified in HEIs, but also to the academic process at large. In this sense, in the view of this study, this adoption is by far very limited and lacking given the rich repository of other aspects which can be utilised through ERM adoption.

2.4.11 Risk Management as an assessment and accreditation tool in the context of HEIs

It is generally conceived among almost all researchers of risk management that ERM is a recognized prominent aspect of good corporate governance (Drew, Kelley, and Kendrick 2006; Fraser 2014; Hillson 2019; Jankensgård 2019). It is an essential pillar for the formation of a successful institution. The need

for an effective risk management framework is widely recognized by academic and corporate institutions to manage all types of risk encountered by an organization. However, managing risk practices in academic institutions appear to be significantly less developed as compared to that of the business world. In Malaysia higher education scenario for example, Bin Md. et al. (2014) argue that some public universities are awarded autonomous status, and therefore, a framework for effective management of risk is needed. According to them, review of literature related to risk management indicated that the ERM framework is an ideal practice and can be applied in different higher education settings. However, the risk management framework of ERM needs to be costumed to suit the unique mission, risk context and risk profile of higher education.

It is almost impossible and impracticable to find everyone agreeing on implementing the same risk management practices. Praisner (2009) suggested different models of risk management would be possible to implement in a certain context depending on the nature of an organisation's activities and the sought outcomes. In this sense, adverse outcomes are possible to happen if wrong risk management procedures or policies are implemented and there will be a need for better or corrective solutions. For example, the European Central Bank (2018) concluded that: "One key lesson from the financial crisis was the need for more information on risk in order to make sound business decisions…"

Tufano (2011) made it clear for university leaders to understand their process through risk management implementation. According to him, this process begins with some essential questions related to the university's mission, its strategy, and the risks that might hinder the university's success. In this sense, risk management should be clear in terms of structure, process and implementation. Similar to any other business, universities should follow the steps suggested by Sum and Saad (2017, p.140) for the implementation of a successful ERM model: analyse the business, identify risk, assess the risk, do risk response planning, and finally monitor risk.

Several advanced countries in the world adopted risk management in their higher education system as a proven and successful tool for accreditation and assessment of the academic performance of their HEIs. Examples were well presented in the works of Hillson (2019) and Lundquist (2013 and 2015). According to Lundquist (2013, p. 145), accreditation in the United States is achieved in higher education institutions through the provision of evidence showing decision making and integrated planning. Related to accreditation is the important requirement for funding in countries such as England, Australia and elsewhere, where governments of such countries have found in integrated risk management a valid and proven framework in order to receive solid and good credit rating.

In the context of UAE higher education, HEIs rating agencies, such as the UAE CAA, are always requiring from HEIs evidence of the existence of encompassing and integrated risk management plans to guarantee a productive credit rating. This requires the respective HEI to demonstrate that its board of trustees or senior management board is well acquainted with and engaged in risk management as a part of its decision-making process. A good example of the application of a similar accreditation program in the evaluation and assessment processes is that of the United Arab Emirates University (UAEU). The UAEU, in their 2018 Academic Personnel Policies Manual, managed to provide for a comprehensive and systematic approach of assessing and evaluating both faculty and administrators' efficiency and performance relying heavily on a model of risk evaluation. This manual, along with the UAE CAA Standards and some other risk management policies from different UAE HEIs, will be the subject of document analysis in the qualitative data collection and analysis section of this study. In the view of UAEU stakeholders, this model would aim at supporting the strategic plans of the university. This Policy Manual defines the Faculty Performance Review as a process based on risk evidence as well as peer-review, aiming at the achievement of professional maturity of both faculty and administrators. Reviewing the performance, scholarship, conduct and administrative service of both faculty members and administrators are among the major objectives best achieved by risk management-based models of assessment and evaluation. Other major and prominent examples of the application and implementation of ERM in the UAE higher education context are numerous, and they include without limitation the Higher Colleges of Technology (HCT), The UAE University, the British University in Dubai (BUiD), Khalifa University, the American University in Sharjah, Al Ain University… etc.

The UK higher education experience in the field of risk-based academic institutional accreditation and quality assurance is worth mentioning here. In the UK, since 1990 quality assurance in the academic context has become an established component of higher education management. It was the UK government's White Paper (BIS 2011), 'Students at the heart of the system', which marked the introduction of a new approach to academic quality assurance in England based on the principles of risk. The UK Quality Assurance Agency for Higher Education (QAA) introduced a revised version of the risk-based approach in 2013–14 for England's current cycle of institutional reviews, with such reviews being conducted based on a specification defined by the HEFCE, called 'Higher Education Review'. This method has relied mainly on the reflection of expectations of proportionality and risk (Black et al. 2015, pp. 20-21). The same resource also accounts for Australia's experience with the establishment of risk-based regulations to help push marketisation and competition forward: "Australia's change in funding

regime and its subsequent battles over risk-based regulation, institutional profiles and standards provides for further evidence of the dual dynamic of growing marketisation and competition that is coupled with growing hierarchical oversight and reduced discretionary professional judgement" (p. 7). In Malaysia higher education for example, Bin Md. et al. (2014) argue that some public universities are granted autonomy, and therefore, a framework for effective management and evaluation based on risk is needed. The studies of Ariff *et al.* (2014), Ahmad et al. (2016) and Sum and Saad (2017) provide a greatly useful account for ERM implementation status in the Malaysian context and set it up in comparison to the international context.

To put the subject or risk management and its relation to academic performance and quality in general in the context of UAE, reference must be made to the UAE Commission for Academic Accreditation of the Ministry of Education (CAA 2019 a & b; CAA 2020). CAA has long been attempting to take initiatives and enforce regulations on academic institutions that would ensure quality assurance and proven performance that qualify them to be accredited and competent HEIs. The UAE educational authorities launched the UAE National Higher Education Strategy 2030 (the National Strategy) to further support the 2021 National Agenda, aiming at building "a more diverse economy that relies less on oil" (CAA 2019a, p. 8). Since higher education in the UAE continues to rise as a major sector leading the community, the quality of education provided to students within this knowledge-based economy, to borrow CAA's Standards 2019 terms, there comes the need for a more solid, broader, yet more flexible higher education system. In this sense, in order for HEIs to play a strategic role in the country's innovation system, CAA (2019a) states that HEIs need to be active in the delivery of research and scholarship as well as high-quality programs that are "relevant to employers in a changing global marketplace" (p. 3).

The UAE government has taken the issue of quality assurance in higher education into careful consideration through the adoption of many initiatives in the way to achieve best quality knowledge for the UAE generations as a promising everlasting source of power. It is understood that all UAE HEIs, whether governmental, public or private, exert best efforts to maintain a future based on a quality knowledge (Warner and Burton 2017). As stated on the CAA website, it is therefore of an utmost significance that academic institutions in the UAE "offer the highest quality programs, programs that are recognized both within the country and internationally for their excellence". However, throughout the study it will be repetitively highlighted how lacking ERM adoption and implementation is in UAE higher education context. The conclusion the study may have is that UAE higher education institutions are in

dire need of an organisational umbrella similar to, for example, the American National Association of State Boards of Accountancy (NASBA) as a sponsor that ensures continuity of professional higher education and management quality (Lundquist 2015).

The CAA made it clear that the "risk management plan, delegation of responsibilities, and insurance coverage for identified risks, are approved by the governing body on at least a biennial basis" (CAA, 2011). However, there has not been enough research evidence that similar formal risk management implementation processes are followed by UAE HEIs. What is confirmed so far is that the majority of universities in the UAE have implemented some form of quality assurance measures in a formal way to guarantee their objectives are met. Al Jundi and Ahmad (2016) give the example of Al Ain University (AAU) where "there is a quality assurance committee in each college of the AAU, which plays a key role in identification, analysis, prioritizing and remedying such risks and ensures that the program goals are met" (p. 75). According to the authors, clear and defined measures mark the implementation of assessment processes of this committee. These measures, according to Al Jundi and Ahmad (2016), would include steps such as clearly defining program goals, conceiving outcomes related to program learning, developing and sustaining assessment tools, defining a target to achieve each assessment measure, implementing the already conceived assessment tools, analyzing data, and getting results.

2.4.12 ERM Implementation as a Culture and Process

Literature and the researcher's document analysis show that ERM is a process of risk identification, risk analysis and risk evaluation. However, this is a very simplistic way of looking into ERM in the context of organisations such as higher education institutions. Vandenberg (2017) argues that ERM implementation must be a comprehensive process. ERM is according to him a culture and a process which formalise how an organisation manages and mitigates risks. Smooth and transparent flow of information throughout the organisation cannot be achieved without the adoption of a good ERM process. Vandenberg (2017) argues that the reason behind that is that ERM clarifies and defines accountability and responsibility in the organisation's daily work. A solid ERM process is required where the framework and approach to allocate resources for managing risk are clearly defined and set. The comprehensive process of ERM indicates a comprehensive plan which helps institutions evaluate risks, implement solutions, and take proactive measures to reduce risk in the future. He also adds that a good ERM process does not mean extra workforce and additional budget. There are always many alternative practical and achievable measures organisations can take to formalise, sponsor and implement this critical process.

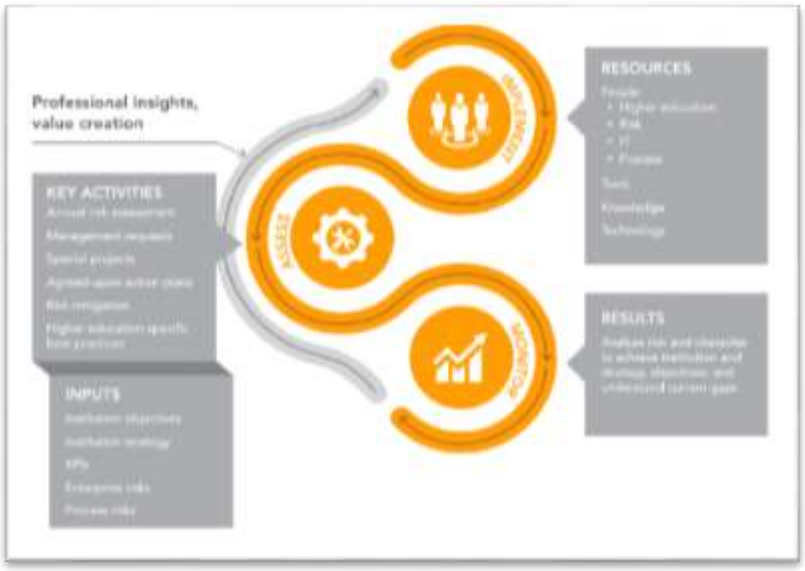


Figure 2.7 – Risk Management Process I (Adopted from Vandenberg (2017)

Hillson (2012), one of the most prominent modern risk management theorizers and practitioners, defines ERM as a process. According to him, "anyone who uses risk management and understands its benefits will recognise that the risk process provides risk-based data to inform decision-making" (p. 3). He explains the risk management process through asking (and answering) six simple questions, summarized as follows:

	Question	Answer
Q1.	What are we trying to achieve from ERM?	(Objective setting, Understanding scope)
Q2.	What might affect me?	(Risk identification, uncertainties, future events)
Q3.	Which from Q2 answers are most important?	(Risk assessment, likelihood/impact)
Q4.	What should we do about answers to Q3?	(Mitigation, Prevention, Avoid/Reduce/Transfer/Accept)
Q5.	Did Q4 answers work?	(Confirm effectiveness)
Q6.	What has changed?	(Adapting to changes in the enterprise)

In their extensive study on traditional risk management, Marsh Risk Consulting (2012) defined the risk management as a process, as follows:

Figure 2.8 – The Risk Management Process II (Adopted from Marsh Risk Consulting 2012)

On its website, Marsh argues that the ERM implementation as a process is viewed as a journey which typically comprises the eleven (11) principles of risk management outlined in ISO 31000, the international standard for risk management. Marsh also argues that ERM as a process must aim at the achievement of the desired level of risk maturity at a given organisation or institution.

In a similar approach, Cassidy *et al.* (2001) describes the ERM a continuum process. They argue that "risk can be depicted on a continuum from managing hazards to seeing risk as an opportunity", as shown in the diagram below (p. 6):

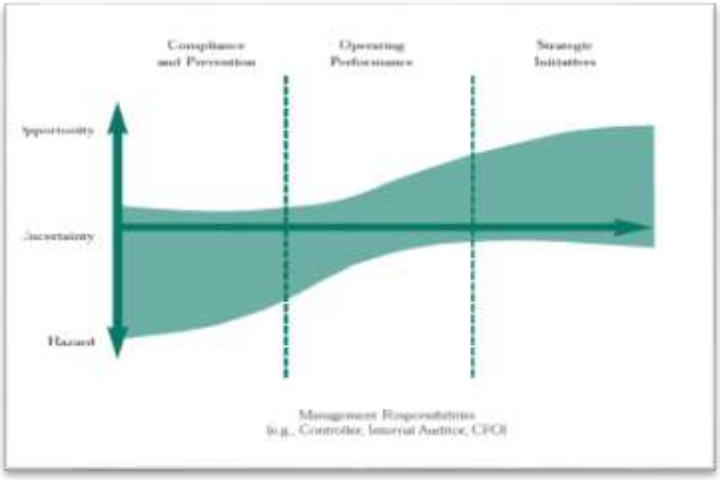


Figure 2.9 – ERM as a Continuum Process (Adopted from Cassidy et al. 2001, p. 6)

In their study, Helshoot and Jong (2006) strongly defend the thought that academic institutions must make "proper strategic decisions" which help them in the achievement of the objectives of their organization in a quality manner. They divided the risks into three main areas, covering the various factors which play a strategic role in assuring safety and security for higher education institutions. The

three main areas are Social safety and security, Organizational safety and security, and Security of knowledge. For example, the risk of fire is regarded as a primary risk of physical safety and is included in first and second areas of their division of risk.

In "*The State of Enterprise Risk Management (ERM) at Colleges and Universities Today (2009)"*, it was noted through a survey conducted by the Association of Governing Boards (AGB) and United Educators' (UE) that 60% of higher education institutions fail to utilise an encompassing, strategic risk assessment model to identify major risks while conducting their missions, and only 5% claimed they applied certain practices for management of major risks.

In their book on higher education risk management; Willson, Negoi and Bhatnagar (2010) list some of the quality challenges which face students and educators at the higher education level. According to them, the absence of quality factors is a risk in itself that poses a pressure on all higher education institutions. This major challenge comes from the fact that there is a poor perception among students of the quality of an educational program. Other challenges touch on how to keep and attract students at a certain college, the quality of the facilities and infrastructure, cooperation with other academic organisations, completion of major projects and initiatives and campaigns, managing scholarships of a competitive nature, and the proper distribution of monetary support that come from federal agencies in certain cases. Online distance learning can also pose a major quality challenge for most universities as well as other recruitment and job filling issues within an acceptable time frame. Additionally, "one of the most known quality management models that has been implemented in higher education is Total Quality Management (TQM). TQM is a philosophy and system for continuously improving the services offered to customers" (Papanthymou and Darra 2017, p. 132).

Baranoff, Harrington and Niehaus (2005) argue that two categories of strategic processes need to be adopted for risk management: risk control and risk finance. According to them, there are six core control techniques that dominate risk management as a process: "avoidance, loss prevention, loss reduction, separation, duplication, and diversification" (p. 219). However, examples of risk finance techniques include transfer methods, insurances, free-hold agreements, and retention which is the self-funding of losses (pp. 221–223). More relevant to the subject of this study would be the research conducted by Murzagaliyeva, Aushakhman and Gumarova (2013). They approached risk management in the system of higher education by examining the risks and threats that contribute to risk reduction. They also argue that similar to what is being done in a market economy, every academic institution must constantly

reshape its activities and forecast the change required in their internal and external environment to achieve quality.

In summary, the major frameworks for ERM implementation, most importantly the COSO ERM Integrated Framework, and ISO 31,000 risk management framework and process, all indicate culture change as the main objective of ERM implementation. In a sense, such frameworks provide limited insight into what impact an organisational culture may have on ERM implementation, or to put it in different words, how such frameworks can or are able to change an organization's culture to improve the ERM implementation processes. Additionally, research has proved that existing frameworks demonstrate the implementation of ERM in a way which reflects routine organizational cultures based on a given institution mechanism of running processes. Such mechanistic cultures may appear to be smeared by the necessity of controlling management where employees or staff are believed to be needing meticulous directions and enforcement to provide their required services for the organization. Therefore, this issue highlights the concern that ERM must be approached or viewed as a change factor of the organization's culture. This would well contradict, and it must contradict, with the fact that organizations should adopt ERM to fit with their existing cultures. A very good example of such contradiction is found in a financial firm, for instance, aiming at the implementation of an ERM-based strategy which derives heavily from the risks and control mechanisms versus what a HEI may apply to implement such strategy in their culture. While a given strategy fits the culture at a financial firm, it may not show any relevance for the culture at a HEI.

2.4.13 UAE CAA and introducing the Standards

According to the CAA (2019a and 2019b), academic and institutional quality need to be the ultimate objective which is expected to be met by almost all HEIs in the UAE. Achieving quality, according to the UAE CAA, can be conceived through securing and assuring "consistent provision of high quality, relevant, innovative learning programs". The tool for that objective is a "varied and complex higher education sector". The CAA (2019a and 2019b) make an account for the common expectations set out in what is known in the UAE higher education context as the National Standards (*the Standards 2019*). It was in 2001 when the UAE CAA introduced its first Standards for Licensure and Accreditation (the *Standards*). Revised periodically, these Standards witnessed the most recent edition in 2011 which remained in use until the publication of the *Standards 2019*. The development of the Standards in the first place was centred around the notion of assuring quality in a small higher education sector, a sector which is always composed of several fresh and inexperienced institutions.

The CAA (1029a and 2019b) went further to even support the claim that the Standards have well paved the way for the foundation and establishment of the UAE's higher education sector, a role which has always been reflected in their very encompassing and contextual nature. In their adoption of a robust national system of quality assurance, the Standards have relied heavily on a wide range of structural varieties, take on different missions and aspire to achieve different levels of maturity convenient for the local context of higher education. This helps build stipulations which the Standards adopt as being supported by explanations and guidance. This robust national system of quality assurance has indeed helped stakeholders of HEIs in the UAE to gain more confidence by meeting the stipulations of the Standards. To achieve that ultimate goal of quality assurance and academic maturity, the Standards 2019 came to base themselves on two key structural elements: *The Standards for Institutional Licensure (SIL) and The Standards for Program Accreditation (SPA).* The two elements indeed came as major developments from the previously CAA published 2011 version of the Standards for Licensure and Accreditation.

As stated earlier several times throughout this study, literature has shown the UAE higher education agencies as unable to refer to ERM as a best practice for IHEs institutional effectiveness and organisational change. Compared to ERM maturity and research in the USA and the UK, for instance, UAE higher education is still lagging behind other sectors in terms of ERM adoption, implementation, and integration. However, in the UAE, a very essential and radical development took place when the MoE updated their CAA Standards in 2019 through the introduction of a '*risk-based approach'* to Institutional Licensure and Program Accreditation. In this sense, risk-based approaches have been recognised by the UAE MoE as a context-sensitive assessment tool of institutional performance. According to the updated Standards, academic effectiveness is determined in the light of outlining regulatory requirements. The risk level of institutions is then identified in accordance with a scale of risk levels which establish the ongoing licensure and ongoing program accreditation review arrangements for HEIs on a schedule of three, five-and-seven-year visit cycles. With the introduction of a risk-based approach to institutional licensure by the MoE, the risk level of institutions is identified according to the threshold risk level as determined by the CAA.

Therefore, it is evident that the UAE government has taken the achievement of quality and quality assurance in higher education into careful consideration through the adoption of many initiatives in the way to achieve best quality knowledge for the UAE generations as a promising everlasting source of power. Mansour (2009) posits that "the drive towards quality in UAE University and other higher

education facilities in UAE is part of the whole country's drive towards quality in private as well as public sectors. At the Emirates' level, both Abu Dhabi and Dubai have launched substantial efforts to institute quality in both public and private sectors" (pp. 9-10). It is generally conceived and understood that all colleges and universities in the UAE, whether supported by the government or private, thrive to sustain the huge potential for a future based on quality knowledge (Warner and Burton 2017; Gallagher 2021). It is therefore of an utmost significance that academic institutions in the UAE "offer the highest quality programs, programs that are recognized both within the country and internationally for their excellence", as stated by CAA on their website. However, throughout the study, it will be repetitively highlighted how lacking ERM adoption and implementation is in UAE higher education context, despite the fact that CAA Standards and similar frameworks are attempts to introduce risk management into the academic system quality assurance. The conclusion the study may have is that UAE higher education institutions are in dire need of an organisational umbrella similar to, for example, the American National Association of State Boards of Accountancy (NASBA) as a sponsor that ensures continuity of professional higher education and management quality (Lundquist 2015).

2.4.14 How to Measure Academic Effectiveness

ERM research has provided a lot on the way to measure, quantify and effectively achieve risk management in organisations in what is called risk maturity and the risk maturity model (RMM) (Hoseini, Hertogh and Bosch-Rekveldt 2019; Hillson 1997 and 2019; Lundquist 2015). This will be further discussed in the next section of this study (2.4.15). However, the researcher's biggest highlight when discussing or defining the academic performance of faculty stakeholders, administrators and instructors is that by talking about their performance within the limits of institutional effectiveness. Some research has provided a good deal of evidence from literature and empirical studies of the inevitable association between effectiveness and quality and how they considerably contribute to academic quality. Abukari and Corner (2010, p. 194) posit that "in many cases multifaceted terms such as effectiveness, efficiency and/or equity are used as synonyms of or to expound on its [quality] meaning". Additionally, as mentioned earlier in this study, the authors further defined quality in the context of higher education as "a *degree to which the best is got from higher education within a given context (local, national, regional, international) taking cognisance of the objective, process and outcome*" (p. 194). They also argue that quality in this sense relies on effectiveness and efficiency in a framework of process of outcome. This study would avail from this definition by conceiving what would be best to measure effectiveness in academic context. The study adopts the notion that quality assurance and institutional effectiveness as two mandatory tools and functions of the corporate governance decisions and ERM implementation

process need to be measured against academic outcomes. These outcomes which help measure academic effectiveness and quality include among other things enhancing the whole academic procedures and processes, developing more convenient and adaptive student learning as well as teaching and learning processes, reinforcing research sustainability and increasing financial profitability. Since the academic process is at the end what matters, and since this study defends the notion that within ERM perspectives it is an input and output process, one must understand the components of that process: it is a relationship between faculty administrators and teachers or instructors being the process itself or the input factor of that process, and students and their learning achievement being the outcome factor. This understating of what academic effectiveness means is, as stated in this study conceptual framework section, what defines academic effectiveness and quality assurance as relational outcomes of the ERM implementation process, and therefore what makes it measurable.

Several studies have examined how academic performance and effectiveness can be measured in a given education system or context (Stensaker 2018; Sledge and Pazey 2013; Campbell 2005; Centra 1993). Campbell (2005) argues that Centra (1993) was among the first researchers to systematically define what good academic performance of faculty members means and how it can be measured. As stated earlier, academic performance of the academic staff is mainly and predominantly measured by "effectiveness" (Centra 1993). According to Centra (1993), effective teaching for example comes as a top input element in the academic process. However, Campbell (2005) also argues that it is not easy to measure that type of academic performance: "One of the difficulties in the measurement of effective teaching is the definition of what effective teaching involves. Centra (1993) cited the following definition of good teaching which was developed by a 1987 Syracuse University committee of which he was a member: *Effective teaching produces beneficial and purposeful student learning through the use of appropriate procedures* (p. 42)." (p. 14).

Such appropriate procedures of measurement would include proper assessment and evaluation tools of both teachers and students as well as the academic processes. These measurement tools are mainly classically identified by educational researchers within the limits of the formative and summative assessments. Berk (2005, p. 49) provided for a profound analysis of the way academic effectiveness can be measured through a survey which listed 12 different measurement strategies or what he called "*12 sources of evidence*": "a) student ratings, (b) peer ratings, (c) self-evaluation, (d) videos, (e) student interviews, (f) alumni ratings, (g) employer ratings, (h) administrator ratings, (i) teaching scholarship, (j) teaching awards, (k) learning outcome measures, and (l) teaching portfolio." According to Berk (2005),

the classical academic assessment tools are the ideal measurement tools of academic performance, and they fall into two categories: "*formative,* which uses the evidence to improve and shape the quality of our teaching, and *summative,* which uses the evidence to "sum up" our overall performance or status to decide about our annual merit pay, promotion, and tenure" (p. 48). In this way, the most important element of this performance management system measurement is the way results and ratings are quantified and how achievements are presented in numbers and signifying grading markers. However, educational researchers agree that this is not the only way performance can be measured in higher education context. In a similar manner, the UAE CAA (2019a) *Standards* provides for all measurement tools for academic institutions accreditation, evaluation and ratings, in defining the "who, what and how" to achieve quality assurance in HEIs. The tools provided by the CAA 2019 Standards include eleven different standards for institutional licensure and program accreditation which are considered as measurement tools for academic quality assurance and effectiveness. From these Standards, the risk-based accreditation program presents itself as one of the major stipulations of governance and management (CAA 2019, p. 25) which HEIs are called to implement if they wish to be accredited and rated and should their quality assurance expectations be met. This study focuses on the significance of ERM implementation as an input tool with the academic effective performance as an output. The results gathered from perceptions obtained from academic administrators and faculty members would represent the way this study will be able to measure academic effectiveness in ERM perspectives. Because of this, ERM researchers need to suggest a model of performance management that is more comprehensive and productive than the existing classical top-down style of managing. This method would take into account the fact that in ERM adoption and implementation both inputs and outputs need to be considered and quantified when measuring performance effectiveness.

However, it is how to measure risk management and maturity level what matters more in this study. Several ERM researchers have proposed what is known in risk management research as "risk maturity models" where different attributes and factors play together in an organisation to define and decide its level of maturity towards risk management implementation and effectiveness. These models will be introduced, defined and referenced in the next section and adopted by the researcher by way of reference and implementation in the quantitative data collection and analysis phase of this study.

2.4.15 Risk Maturity and the Risk Maturity Models (RMMs)

Risk maturity models (RMMs) are the most commonly used measurement concept among the majority of ERM researchers (Hillson 1997 and 2019; Hopkin 2012; KPMG 2021; RIMS 2006; Deloitte 2006 &

2019; Abrams, et al. 2007; Lundquist 2015; Hoseini, Hertogh and Bosch-Rekveldt 2019). *Risk maturity* is a term defined differently by different researchers and ERM and QA focused entities. Marsh and other similar prominent organisations argue that risk maturity as a concept is a measurement tool adopted by an organisation to help them better understand where they fit in terms of risk management and therefore define their overall risk position or status including the value created from risk management initiatives. Since, in terms of risk management, it is the intention and ultimate goal of institutions, whether academic or otherwise, to avoid negative risks (threats) and invest on positive ones (opportunities); it is important to implement a model which approaches and measures risk management clearly and formally. Wieczorek-Kosmala 2014 (p. 134) concluded in her paper that "grounded on a strategic (holistic) approach to manage risk in organisations, *Risk Maturity Models* are presented as a valid tool, supporting risk management procedure by providing so called 'hallmarks' of advancement". Those institutions, which are already implementing such models, are also invited to improve their existing approaches and models to risk management (Hoseini, Hertogh and Bosch-Rekveldt 2019, p. 1). According to the authors, the adoption of such models also requires a clear definition of institutional objectives, proper planning and resourcing, as well as effective monitoring and control. In this context, a measurement tool is much needed which helps institutions identify areas of improvement and measure the progress of risk management implementation and processes improvement. Therefore, a risk maturity model (or what is known as *RMM*) is such a tool which can be utilised to achieve that purpose.

In addition to research in the field, the global market has witnessed a good deal of corporate, finance and even academic institutional service providers which promise to offer tailored professional ERM health checks as well as maturity level assessment tools. Through the document analysis process, the researcher concluded that some of the UAE HEIs resorted to such universally accredited service providers to help them write up as well as adopt a solid ERM policy for a better implementation, and a more effective process for risk periodical reviews and risk health check and risk maturity assessment updates. The cyber world is currently abundant in a myriad of such service providers, examples are KPMG (2021), CIMA, the National Association of College and University Attorneys (NACUA), the University Risk Management and Insurance Association (URMIA), and LRQA. These providers are web-based organisations which provide solid and clear risk policies and manuals writing support and other related ERM services. They also provide convenient risk maturity assessment tools tailored to fit the organisational structure and requirements of any institution.

On their website, KPMG (2021), for example, states that their "ERM Maturity Assessment Tool offers support when determining the maturity of risk management in an organization. The Tool considers a broad spectrum of parameters including but not limited to risk appetite, risk governance, risk culture, risk identification and assessment, risk monitoring, risk reporting and usage of data, and technology in risk management. The risk maturity model is based on the ERM framework, comprising seven key components. It is aligned with COSO and ISO 31000: 2018 ERM framework". KPMG (2021) RMM relies on a process of risk compliance check, ERM health check, and ERM maturity assessment. The document analysis of this study showed that at least two of the three public universities and three of the private universities have done so, where KPMG was stated as the writer of their ERM manuals and procedure policies. On the other hand, CIMA provides HEIs board of directors and senior executive teams with tailored and adaptive tools of ERM identification, assessment and evaluation. In their approach to ERM and ISO 31000 requirements, CIMA states that their tool is organised in such a way as to cover the common areas of risk management implementation process. In this sense, their tool is organised as to cater for "Risk culture, Risk identification, Risk assessment, Articulation of risk appetite, Risk response, Risk reporting Integration with strategic planning, Assessment of ERM effectiveness" (Collier, et al. 2006).

In the context of higher education, some researchers have shed light on the importance of adopting such RMMs by academic stakeholders (Wieczorek-Kosmala 2014; Lundquist 2015; Hillson 2019). Away from the finance, business and insurance markets, Wieczorek-Kosmala (2014) argues that it is "highly important to promote and discuss ways in which non-financial companies may implement and then control their efforts in managing risk". The author went further to discuss ways of the application and utility of RMMs in certain non-financial or non-profit institutions. Lundquist 2015 (p. 38) posited that numerous authors, researchers and organisations have discussed and summarised different RMMs and identified programs through which RMMs can be measured and evaluated in HEIs (e.g., Hillson, 1997 and 2019; Hopkinson, 2000; RIMS, 2006; Ciorciari & Blattner, 2008 Mehta, 2010; Deloitte, 2006 & 2019; Abrams, et al., 2007; Aon, 2014; Marks, 2011; Battenburg, Neppelbroech, & Shahim, 2014). Wieczorek-Kosmala (2014, p. 138) defined RMMs structure in the format of "a matrix in which the levels of maturity are cross-referenced with the attributes reflecting the primary risk management practices. Each of the matrix's field outlines the competences that indicate the attained or desired practices", as shown in Figure 2.10:

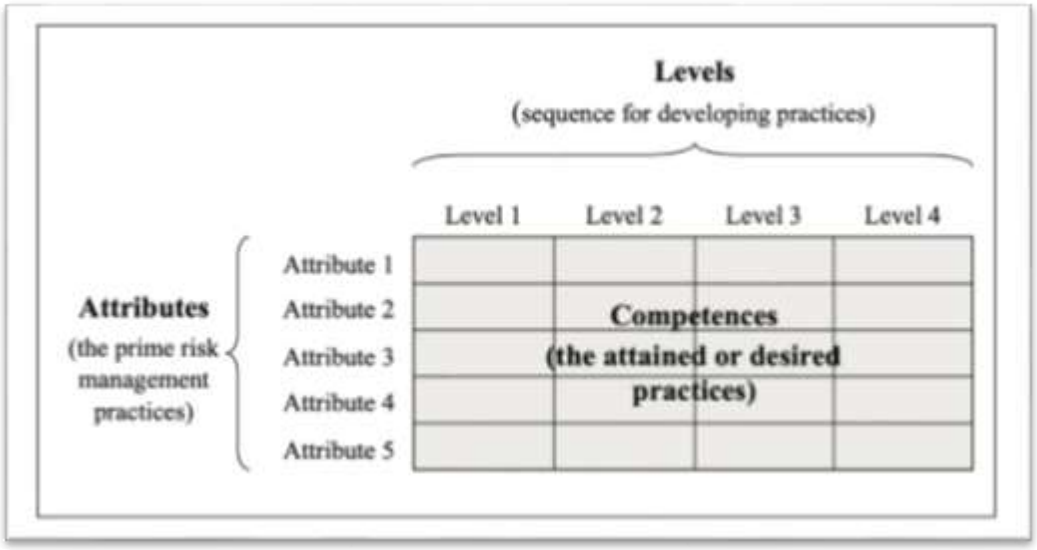


Figure 2.10 – The Structure of Risk Maturity Model – Adopted from Wieczorek-Kosmala (2014, p. 139)

However, RMMs would normally contain either four or five levels of maturity indexes, and they are measured within the parameters of either one of three formats: *1) an attributes-maturity level matrix, 2) a questionnaire or 3) a combination of attributes-maturity level matrix and a questionnaire* (Hoseini, Hertogh and Bosch-Rekveldt 2019, p. 3):

- The *attributes-maturity model* is presented in the form of a table in which the attributes are exhibited in the first column and the levels in the first row. The table provides explanations for each attribute in each level. The user can select a level of maturity based on the explanations provided for each attribute.
- The *model with questionnaires* comprises detailed questions to be answered by survey respondents. The respondent may select a score between a Likert-scale-based 1-to-4 or 1-to-5 category, depending on the level of maturity at their institution.
- In the *combined model*, the attributes-maturity level matrix is used to better treat and score the questions of the questionnaire.

The researcher in this study adopted the second format presenting four maturity levels through questionnaires through the analysis of respondents' perceptions towards the risk maturity level at their respective institution.

In all cases, all these RMMs would help classify institutions into four or five levels, starting with the utilisation of traditional or ad hoc approaches to risk management implementation and moving towards the higher level where risk management is fully implemented and integrated into the business and

organisational practices as well as the strategic objectives and decision-making of the institution. In this context, an ERM maturity continuum would contribute to shaping the responses to risk management compliance and perceptions (Abrams, et al. 2007; Lundquist 2015; Hillson 1997 & 2019; Hoseini, Hertogh and Bosch-Rekveldt 2019).

ERM research in higher education context showed that risk maturity in HEIs can be tested against different phases which mostly adopt linear processes of four or five progressive stages (Lundquist 2015, p. 140). However, the researcher would adopt a model similar to Lundquist (2015) adopted an ERM maturity model with numerous tasks associated with the four maturity levels of forming, developing, established, and integrated. Lundquist (2015) concluded that irrespective of what terminology is associated with each of these RMMs, there are common factors identified across all of them: "the capability to identify, gauge, prioritize and manage risks; the degree to which management decision-making has a risk component; the depth to which risk awareness is 'embedded' or 'systematized' in day-to-day operations; and the engagement of stakeholders in the ERM program" (p. 37):

Table 2.3 – Overview of Risk Management Maturity Models and Levels (Adopted from Lundquist 2015, pp. 37-38)

Author	***Traditional or "pre" ERM***	***Level 1***	***Level 2***	***Level 3***	***Level 4***
Hillson (1997)		Naïve	Novice	Normalised	Natural
Hopkinson (2000)		Naïve	Novice	Normalised	Natural
RIMS (2006)	Ad hoc	Initial	Repeatable	Managed	Leadership
Deloitte (2006)	Tribal/ Heroic	Specialist Silos	Top-down	Systematic	Risk Intelligent
Abrams, et al (20007)		Comply	Improve	Improve	Transform
Ciorciari & Blattner (2008)	Very weak	Poor	Mid	Good	Optimized
Demindenko & McNutt	Ad hoc/not in compliance	Isolated activities	Coordinated Activities	Coordinated activities	Holistic ethical system
AON (0214)		Initial	Basic	Defined/ Operational	Advanced
Marks (2011)	Ad hoc	Preliminary	Defined	Integrated	Optimized
Batenburg, Neppelenbroek, & Shahim (2014)		Forming	Developing	Normalized/ Established	Optimized

In summary, by way of answering the RQ1 and obtaining respondents' perceptions on the effectiveness of ERM implementation in their institution, the researcher availed from these RMMs and adopted a

questionnaire based RMM, based on four levels of risk maturity ratings in the questions, moving from the initial and the traditional (*A/1; B/2)* towards the mature, integrated and developed *(C/3; D/4*).

2.4.16 Academic Effectiveness and Quality Assurance within the Context of ERM

It was explained in the conceptual analysis section of this study what different perspectives of defining academic effectiveness exist and where it falls as a general concept within the ERM process continuum. Additionally, as stated before, this study takes the stance of adopting the CAA (2019a & 2019b)) perspective of academic effectiveness in that it comes "at the heart" of HEIs' processes and functions" (p. 17). This study also adopts the definition of quality assurance by the UAE CAA as *"fitness for purpose FFP*". Furthermore, the study takes shelter in its approach to quality in the analysis provided by Abukari and Corner (2010) when they defined quality in the context of higher education as "a degree to which the best is got from higher education within a given context (local, national, regional, international) taking cognisance of the objective, process and outcome" (p. 194). However, following is a brief account of some of the literature which highlights the relationship between academic effectiveness and quality assurance on the one hand and ERM as a process on the other hand.

It is accepted among all prominent authors in the literature review that ERM has positive outcomes with regards to the management and processes of all organisations, and that is what we call "quality". The researcher has already introduced the interrelationship between risk management integration into the academic qualification assessment and accreditation processes and how they lead to quality and institutional effectiveness in higher education. In the UK, for example, a new approach to academic quality assurance was introduced in 2013-2014 based on the principles of risk. Therefore, the UK QAA introduced a revised version of the risk-based approach in 2013–14 for England's current cycle of institutional reviews. As stated before, Hoyt and Liebenberg (2011) defended their claim that "implementation of the ERM had a positive value towards the firm value" (Teoh, Lee and Muthuveloo 2017, p 223). Waweru and Kisaka (2017) strongly argued of the significant relationship found between the level of ERM implementation and the firm's value and as such assurance of quality.

Therefore, what matters in people and institutional performance is quality assurance, and good quality assurance in specific. According to Lundquist (2013), ERM relies on people more than on tools, techniques, mathematical interpretations of things, and this is what makes it different from operational risk management and financial risk management programs. In this sense more emphasis is placed on *people's performance and role*, since human capital development is the ultimate objective of the ERM process, and hence development of the human factor would not be achieved without a proven tool of

quality assurance. For this reason, this study adopts people's performance and role in the ERM implementation process while investigating the perceptions of faculty members and administrators on the topic. Lundquist (2013) made a link between ERM implementation and academic performance practices in that ERM focuses on the human capital more than anything else: "Unlike operational risk management and financial risk management programs – which concentrate on mathematical analysis, tools and techniques – ERM training often focuses on people. More emphasis is placed on leadership, change management, human resources management, and negotiation skills" (p. 156). Tools of ERM implementation in organisations such as the academic ones would suggest the investment of best human capital tools through effective and quality performance. It is through the adoption of ERM based tools that HEIs can achieve their quality performance goals. Throughout the theoretical framework and literature review sections, the researcher provides justifications for this adoption and makes relevant references to prominent researchers in the field. In all cases, the conceptual framework of this study suggests academic effectiveness as an ultimate output of the ERM implementation process which the study focuses on.

2.4.17 Academic Quality Assurance in the Context of ERM Implementation

According to Saeed and Saeed (2018), ***quality assurance*** as a term used in higher education context refers to "an ongoing, continuous process of evaluating ... the quality of a higher education system, institutions, or programmes" (p. 178). Increasingly, in higher education quality assurance is gaining significant attention amongst higher education institutions worldwide. This attention drives mainly from the willingness of these institutions to meet the growing needs for quality in education. Universities around the world continuously and competitively strive to achieve their institutional mission and objectives which guarantee public satisfaction and stakeholders' demands (see e.g., Westerheijden, Stensaker and Rosa, 2007; Cartwright, 2007; Angappapillai and Annapoorani, 2012). The importance of quality assurance to higher education was further investigated by Abukari and David (2019). According to Abukari and David (2019), "Quality assurance (QA) has remained an issue and an important element in higher education (HE) practice since the 1990s" (p. 305). According to CAA (2019a), the updated *Standards 2019* for HEIs accreditation and licensure are designed primarily on the notion that effective operation of the institution's quality assurance as well as institutional performance effectiveness are at the heart of higher education learning process development. "In relation to governance, financial management and academic integrity, the *Standards* require governing bodies, management personnel, faculty, students and all other institutional stakeholders to act professionally, and to uphold the highest levels of integrity and ethical behaviour" (p. 9). According to Al Alami et al. (2017) in their extensive

KDHA corporate governance report, governance outcomes are measured by good performance or what is referred to as the positive impacts or benefits of good corporate governance. They argue that good governance can only be measured in terms of good performance (academic, financial) and reputation (performance and values) (p. 35). In the schooling environment, they also talk about the best resources, such as teachers and facilities, which educational institutions can utilise in order to obtain positive outcomes for their students and learning process. (p. 16).

The best statement to summarise the definition of the quality/quality assurance concept in higher education context is to rehearse Abukari and Corner's (2010) assumption that quality should ideally be viewed as content, process and outcome:

> "… quality should be viewed both as content, process and outcome; this means that the quality dimension should be based on the extent to which university policy and strategy, teaching syllabus/content and teaching methods and strategies; research areas, approaches and methods; and service activities and community relationship reflects the needs of the given community… This will then require appropriate assessment and evaluation tools to monitor and direct activities to achieve required objectives." (p. 195).

Maintaining and improving quality and effectiveness of academic performance in higher education is the main focus of all private and government universities in the UAE (Warner and Burton, 2017). As stated earlier, according to the updated UAE CAA *Standards*, academic effectiveness is determined in the light of outlining regulatory requirements. In this regard, in the UAE there are basically two types of accredited universities, one accredited by Ministry of Higher Education and Scientific Research, under the umbrella of CAA, and other types of universities are actually foreign universities (accredited in their own countries) located in free zone areas of the Dubai Emirate, under the umbrella of Knowledge and Human Development Authority (KHDA). "As of 2020, there are 74 licensed institutions in the UAE" (CAA 2020, p. 10). As all the accreditation manuals and policies indicate, quality and/or quality assurance are top requirements by the Ministry of Education in the UAE. Additionally, as started earlier in this study academic performance quality is of a paramount significance and importance in the fulfillment of UAE National Strategy for Higher Education 2030. On top of all initiatives for the fulfillment of that Strategy comes the "National Quality Framework" initiative which aims at applying effective quality control systems across all higher education institutions in the UAE (UAE Government.ae / National Strategy for Higher Education 2030).

In this perspective, the researcher defends the notion that there is no point in talking about the relationship between ERM implementation and academic quality assurance if academic quality assurance would not

entail at least some if not all the following major components: enhancing the whole academic procedures and processes, developing more convenient and adaptive student learning, and teaching processes, reinforcing research sustainability and increasing financial profitability. This study is based on the premise that ERM implementation needs to work in that direction, to integrate all these components realistically and conveniently in one body within the overarching corporate governance of a given HEI.

2.4.18 Perceptions of ERM in HEIs

The main research purpose and question evolve around the notion of identifying and analysing perceptions made by academics in HEIs of ERM implementation and how they could lead to a better understanding and conceptualisation of how ERM can and must be effectively implemented. Some recent ERM research shows that it was human perceptions made around ERM which saved ERM from going extinct. Describing ERM practice as a "poor descriptive and normative model", Martin and Power's (2007, p. 9) message throughout their study, as well as through other similar studies, almost led to the demise of ERM as we know it today (Blaskovich and Taylor, 2011). In their research, Blaskovich and Taylor (2011), and to the delight of recent ERM proponents, posit that Martin and Power's claim about ERM near death was either exaggerated or at least deserve to be ignored. In order to stress this notion of ERM survivability, they adopt the concept of the perception factor in their approach to ERM rating and evaluation in both academic and financial institutions. In clearer terms, they argue that individual bias affects to a great degree ERM decision making. The results of their research suggest that with respect to risk rating in relation to ERM, different outcomes are obtained by different organisations by virtue of various perceptions made by different individuals or groups of individuals.

In higher education context, perceptions of ERM implementation have been investigated by several researchers to define its scope and relation to ERM effective implementation. Deck (2015), Lundquist (2015), Bin Md. et al. (2014), Centko (2017) and Deloitte (2019). Centko (2017) based his ERM research in higher education context on the attempt to answer four major questions, two of which were based on how risk is perceived by academic administrators where he concluded that the majority of risk types are familiar to all levels of administrators at academic institutions. Similarly, Lundquist 2015 (pp. 13-14) defended the notion that perceptions surrounding ERM implementation in higher education, or what she refers to as "*attitudes*", may greatly vary from one individual to another and from one academic institution to another. Research on risk management and decision making associated with risk has concluded that people's ability to judge and how they behave and react to things have a big influence on their risk associated decision making. Examples of such research can be best demonstrated in the work

of Peter Slovic and his team in the University of Oregon. Studies conducted by Slovic and Weber (2002), Slovic *et al.* (2004 and 2005), Slovic (2007), and Blaskovich and Taylor (2011) show how "feelings" of the human beings "affect" the way we respond to risks and make our decisions based on those feelings. Slovic *et al*. (2005, p. 35) argue that "although analysis is certainly important in some decision-making circumstances, reliance on affect and emotion is a quicker, easier, and more efficient way to navigate in a complex, uncertain, and sometimes dangerous world." In this sense, the authors concluded that "whereas risk and benefit tend to be positively correlated in the world, they are negatively correlated in people's minds" (p. 36). Therefore, the human response factor, in how it influences and shapes judgment, is a proven researchable area for those interested in risk management and its implementation.

In a similar context, Barnett and Breakwell (2001) and Slovic (1987) argue that risk perception is greatly influenced by the personal feelings people associate with risk. It is interesting to quote Blaskovich and Taylor (2011, p. 8), who concluded that "risk decisions are subject to framing and personal bias, as well as the culture of an organizational unit". In their research, Slovic and Weber (2002) found that the more a provided risk's score on what they named the dread factor, in speeding up heart rate and making people more anxious, the higher risk perception is achieved. In this way, it becomes obvious that defining and identifying risk as perceived by the human response factor seem significantly different from the way risk is defined in the theoretical and traditional literature. The clear and simple explanation for that is that research has found that "different individuals will see the same risk situation in quite different ways" (Lundquist 2015, p. 13).

However, while the research about risk perceptions and response demonstrates that human emotional responses tend to overshadow the rationale-based responses, the majority of risk management frameworks entertain some form of risk quantification. In this sense, because "risk and uncertainty make us uneasy… quantifications are one manner by which we try to turn subjective risk assessments into objective measures" (Koenig 2008, p. 15). Empirical research and studies show that people tend to make their choices based on their personal preferences and attitudes towards the outside world. To serve the purpose of risk perception measurements, some research has discussed the use of quantifications when discussing risk, in the same manner as when decision makers tend to be precise when estimating risk by using numerical scores and percentages, (Lundquist, 2015). In summary, research and empirical studies of risk have indicated that risk preference, as well decision making associated with risk, vary with context and the human bias factor, and therefore needs to be measured and quantified.

2.5 Chapter Summary

This Chapter Two has accounted for both the theoretical and conceptual frameworks of this study and situated this study within the appropriate literature, discussing the subject of ERM in higher education. Both the theoretical framework and conceptual analysis were introduced in this Chapter, as well as accounting for the proper context of ERM in higher education and more particularly in the context of UAE Higher education.

The review of relevant literature has also identified a number of gaps in ERM research especially related to the UAE and the region as a whole. First, the evident research gap identified (as highlighted in the Introduction Chapter) is the scarcity of ERM research in higher education in general and in the regional and UAE higher education in particular. Second, literature review has shown the absence of important theoretical elements that adequately explains ERM implementation and integration in HEIs, such as adequate explanation and understanding of "organisational change" and "organisational learning" within the context of ERM implementation in HEIs. These elements were essential to help understand and explain the proposed preliminary conceptual framework of the study and further its research. Third, literature review has shown the absence of empirical or case studies that focus on the important elements of perceptions of the major academic stakeholders to investigate the concept of ERM implementation and integration in higher education. This study has contributed to bridging this gap by investigating the perceptions surrounding the effectiveness of ERM and proposing a set of workable guidelines for HEIs in relation to effective ERM implementation in higher education context. However, literature reviewed on ERM in the context of higher education indicated that even though there is a considerable lack of empirical research focused on the subject, however, there is a growing tendency among recent researchers to investigate the field more profoundly and practically (Lundquist 2015; Deck 2015). The reason HEIs started to show more interest in ERM is not only for formal institutional acknowledgment and evaluation purposes, but also because of the need to survive and compete in an ever-growing business-like market (Soomro and Ahmad, 2012). Literature has shown that while higher education as a context preserves its unique identity (Birnbaum 1988; Lundquist 2015; Deck 2015; Perera et al. 2020), research has only investigated the ways HEIs are conceiving change on the basis of individual cases, and therefore there is still a need to design a clear research framework convenient for the unique culture of higher education (Bleiklie 2014).

The literature review of this study is concluded by focusing on the concepts of academic effectiveness and quality assurance as ultimate results of the ERM process, as envisaged and materialised in the conceptual analysis of the study from different perspectives.

In the UAE context, research indicated that higher education does not have explicit federal regulations necessitating and requiring ERM. The UAE CAA accreditors and ratings officials and regulators, however, demand that IHEs engage in effective decision-making and governance that takes into consideration certain components of risks to meet their strategic objectives and achieve their missions. Unlike research in the USA and the UK, literature has evidenced that the UAE higher education agencies have not managed yet to refer to ERM as a best practice for IHEs organisational change. In simpler terms, UAE higher education is lagging behind other sectors in terms of ERM adoption, implementation, and integration. To sum it up, literature has indeed shown that even though the concept and practice of ERM may be recommended and applicable to higher education, the unique institutional identity and culture of HEIs make it difficult for higher education stakeholders to implement the ERM concept and embrace its complexities. This study is, though, an attempt to show that perceptions made by faculty members and administrators add to the value of ERM adoption and implementation.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Saunders, Lewis and Thornhill (2019, p. 128) define, in simple terms, research methodology as "the way in which you collect data to answer your research question(s)." Both educational and business research scholars agreed that it is the research inquiry and objectives that determine the research methodology including its *philosophical paradigms, approach, design* and *data collection and analysis tools* (Creswell 2014; Fraenkel and Wallen 2015; Creswell and Creswell 2018; Cohen, Manion & Morrison 2018; Saunders, Lewis & Thornhill 2019). According to Saunders, Lewis and Thornhill (2019, p. 128), "how you collect your data belongs in the centre of the research 'onion'", which is a multi-layered diagram devised by Saunders to define in a visual way and describe how research is framed through the representation of major research pillars in the form of "onion" layers (Figure 3.1):

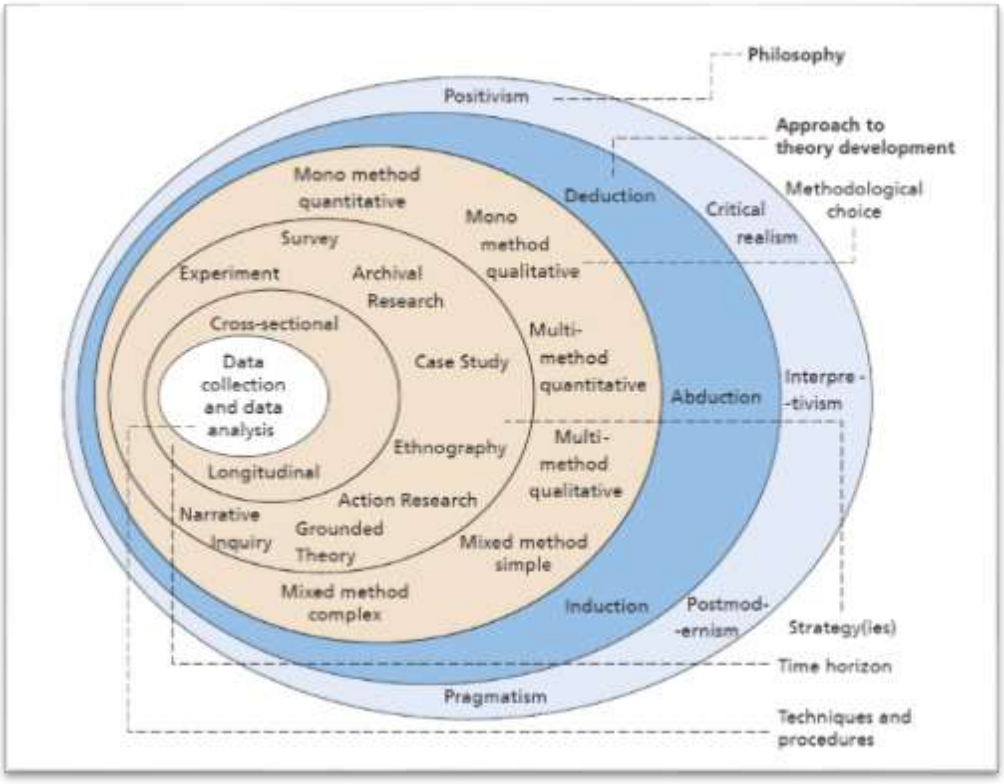


Figure 3.1 – The Research Onion (Source: Saunders, Lewis and Thornhill (2018 & 2019)

According to Saunders, Lewis and Thornhill (2018 & 2019), based on the different layers of the research onion, research methodological designs in education studies are determined. No matter what researchers choose for their outer layers of the onion, the research methodologies they adopt for their data collection and analysis must suit their type of inquiry as well as the philosophical approach and must take the format of one of three approaches to research: either quantitative, qualitative or mixed method (Creswell 2014;

Fraenkel and Wallen, 2015). However, in all cases, the choice of research methodology and data collection instruments is never arbitrary. In educational research, for example, it is agreed among all prominent research scholars (Creswell 2014; Fraenkel and Wallen 2015; Creswell and Creswell 2018; Saunders, Lewis & Thornhill 2019; etc.) that the choice of research design is determined by the aim and questions of the research. For example, while answering the research questions the quantitative research design suits the *positivist objectivist* philosophical approach, while qualitative design must be approached within the *interpretivist subjective* philosophical paradigm. By the same token, while conducting data collection and analysis, quantitative research necessitates the *deductive* model of thinking and on the other hand qualitative research incorporates the inductive model of thinking (Creswell 2014, p. 93).

According to Saunders, Lewis and Thornhill (2019), depending on the aim and questions of the study, study methodological designs may be identified as either descriptive, exploratory or explanatory. Relying on the main purpose and corresponding objectives set out in Chapter One of this study (of *investigating the effectiveness of ERM implementation in UAE HEIs*), this study aims at 1) investigating the perceptions surrounding the effectiveness of ERM (as an academic accreditation, assessment, and evaluation tool) and its implementation in UAE HEIs, and 2) proposing a set of guidelines for UAE HEIs in relation to effective ERM implementation in the UAE higher education context. Therefore, the researcher structured this study based on the stated purpose and objectives by way of answering their related questions through an ***explanatory (quantitative-qualitative) mixed-method design***.

Therefore, this chapter presents the study approach and design, and its associated philosophical research paradigms. It describes the study setting that includes the study site and context; defines the study population, sampling methods and participants; presents the analysis and evaluation of the study instruments, and related validity and reliability check tools; and discusses the role of the researcher. The chapter concludes with the research activity plan adopted by the researcher to achieve the study purpose and answer its research questions.

3.2 Study Approach – Philosophical Paradigms

It is agreed among several social science researchers (e.g. Creswell & Plano Clark 2011; Creswell 2014 Creswell & Creswell 2018; Cohen, Manion & Morrison 2018; Saunders, Lewis & Thornhill 2019) that mixed-method research, or the explanatory mixed-method design in the case of this study, not only involves data collection, but also "concerns philosophical bases of research, paradigms which guide research and assumptions which inform the design and conduct of research" (Cohen, Manion & Morrison 2018, p. 32). In this perspective, and because one way of looking into a research problem or answering

research questions will not do justice to the problem in question (Creswell & Plano Clark 2011; Creswell 2014; Creswell & Creswell 2018; Cohen, Manion & Morrison 2018), the researcher adopted different philosophical paradigms to support the discussion of the ERM inquiry in the higher education context, and therefore define the study approach and design. Mixed-method research never limits the researcher to a specific paradigm, which was the previous trend among researchers. In both social and human sciences, mixed-method research is viewed as a genuine approach for conducting research (Creswell & Plano Clark 2011).

However, even though the research design and paradigmatic approach are not strictly associated, the research design defined in section 3.3 may have particular inclination to the research's philosophical and paradigmatic approach or approaches to be used (Creswell 2012, 2014; Creswell & Creswell 2018; Saunders, Lewis & Thornhill 2019). In this study, rather than following the ***pragmatic paradigm*** "as a philosophical underpinning for mixed methods studies", and where "individual researchers have a freedom of choice" in the way they adopt their "methods, techniques and procedures" (Creswell 2014, p. 11), the researcher conveniently and independently adopted two different ***philosophical paradigmatic*** stances based on the sequential mixed-method study design chosen. These philosophical paradigms are mainly reflected in the ***postpositivist objectivist paradigm*** position to represent the quantitative part of the research, along with and supported by the ***constructivist interpretive paradigm*** to guide the researcher through the qualitative section. The researcher's adoption of these two philosophical paradigms independently rather than the pragmatic stance is based on the fact that the researcher is not mixing the findings and interpretations of either phase of the study, even though the researcher tends to mix and combine the 'analyses' of both findings at a later stage. However, the researcher uses each to support the other in a clear, sequential and independent order.

According to Creswell (2014, p.7), "the postpositivist assumptions have represented the traditional form of research, and these assumptions hold true more for quantitative research than qualitative research". Postpositivism is also adopted in quantitative studies when "we cannot be positive about our claims of knowledge when studying the behaviour and actions of humans" (Ibid., p. 7). In this sense, the postpositivist paradigm is adopted where the researcher intends to quantitatively and objectively investigate the main constructs of the study to conceive results that support the qualitative findings (Creswell 2014; Creswell & Creswell 2018).

On the other part of this research spectrum, where the researcher intends to obtain qualitative data, "the interpretive approach is appropriate ... as it allows the researcher to ask open-ended questions, observe

and live with the participants in their natural social context" (Troudi 2010, p. 2). Constructivist interpretivism, as posited by Creswell (2014), is followed in qualitative research where the researcher's main objective is to draw on participants' views and rely on them in order to understand the situation being studied. This is very appropriate for the interpretation of interviewees' answers. According to interpretivism, each participant's truth is taken into consideration and valued, where:

> the central endeavour in the context of the interpretive paradigm is to understand the subjective world of human experience. To retain the integrity of the phenomena being investigated, efforts are made to get inside the person and to understand from within (Cohen, Manion & Morrison 2018, p. 19).

3.3 Study Design

This research adopts an explanatory quantitative–qualitative mixed-method design as a reflection of the adopted research approach, which is mainly quantitative and therefore ***deductive*** and postpositivist in nature (Creswell 2014; Fraenkel & Wallen 2015). Mixed-method research has indeed secured a prominent and considerable place in educational research (Creswell & Plano Clark 2011; Creswell 2014; Fraenkel & Wallen 2015; Cohen, Manion & Morrison 2018). Creswell (2014, p. 14) defined mixed-method study design as a research design that "involves [the] combining or integration of qualitative and quantitative research and data in a research study". Mixed-method research was also defined by Creswell and Plano Clark (2011, p. 4) in a comprehensive and informing manner. According to them, mixed-method research "typifies research undertaken by one or more researchers which combines various elements of both quantitative and qualitative approaches (e.g., with regard to perspectives, data collection and data analysis) to research, together with the nature of the inferences made from the research" (Ibid., p. 4), the purposes of which are "to give a richer and more reliable understanding (broader and deeper) of a phenomenon than a single approach would yield" (Cohen, Manion & Morrison 2018, p. 32).

The researcher adopted this widespread study design in educational research for several reasons. Firstly, this form of research enabled the researcher to obtain a more comprehensive and complete understanding of the phenomenon under investigation in this study than single methods or approaches. The intention of the researcher in this context is to provide a better understanding of the inquiry under investigation. Secondly, this approach helped the researcher "answer complex research questions more meaningfully, combining particularity with generality" (Cohen, Manion & Morrison 2018, p. 33). Finally, the researcher adopted this kind of research in order to use the qualitative results as triangulation tools to support and inform on the quantitative data, as will be further discussed in the next sections, as well as during the data collection and analysis phases.

Therefore, the nature of this research is ***explanatory*** in the sense that the researcher supports the results of the questionnaire sent to faculty members and academic administrators with document analysis and interview research qualitative tools. This study first used a quantitative method of a structured questionnaire supported by a brief qualitative semi-structured interview method to answer the major question of the study (RQ1). The researcher then used the follow-up qualitative method of document analysis and interviews "to follow up and refine the quantitative findings" (Fraenkel & Wallen 2015, p. 561), while answering the remaining research questions (RQ2 and RQ3), as shown in Figure 3.2.

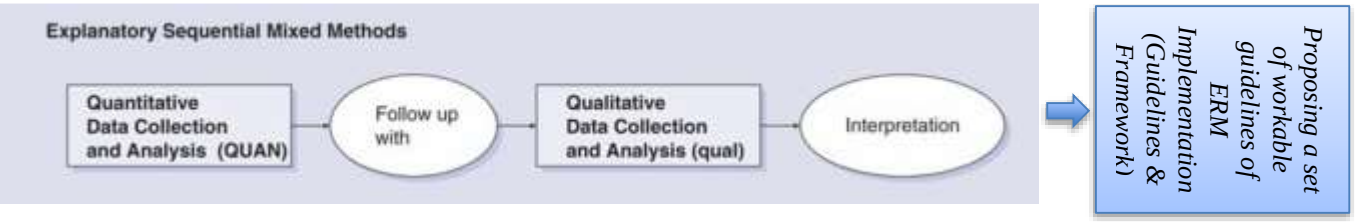


Figure 3.2 – Explanatory Study Approach – Adopted from Creswell (2014, p. 220)

Following the gap analysis presented in previous chapter, Table 3.1 shows how the study methodology and approach were adopted to answer the research questions of the study and which research instrument tools were used and defines what data analysis methods were implemented. In other words, the gaps identified in research informed the main aim and focus of the research. Additionally, the methodology was selected by the researcher based on its appropriateness to generate relevant data and supporting evidence to achieve the research aim, given that the paucity of research in the field meant little to no existing and reliable methodology to adopt from.

Table 3.1 – Research Design in Relation to the Questions of the Study

Research Questions	***Research Objectives***	***Research Approach***	***Research Instrument***	***Data Analysis***
RQ1	*Investigating the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs.*	*Quantitative*	*Structured Questionnaires*	*Statistical: Descriptive (Non-Parametric tests)*
		Qualitative	*In-depth Semi-Structured Interviews*	*Thematic Coding & Categorising (the Interactive Model)*
RQ2	*Exploring the current status of ERM policies and practices in UAE HEIs.*	*Qualitative*	*Document Analysis*	*Analytical & Content Analysis (the Interactive Model)*
RQ3	*Proposing a set of workable guidelines for more effective ERM strategies for HEIs in relation to effective ERM implementation in the UAE higher education context.*	*Qualitative*	*In-depth Semi-Structured Interviews*	*Thematic Coding & Categorising (the Interactive Model)*

Based on the theoretical considerations highlighted in the Literature Review chapter and previous research in the field, the researcher adopted the mixed-method research study approach, comprising both the quantitative and qualitative designs, for the following reasons. The main reason the researcher used an explanatory mixed-method approach is because it suited the nature of the different research questions and expanded on the range of inquiry by using different inquiry components (Johnson & Christensen 2014, pp. 501–502). Additionally, this mixed-method approach was adopted in the collection of data and answering the research questions since all single methods would have their own "bias and weaknesses, and the collection of both quantitative and qualitative data neutralize[d] the weaknesses of each form of data" (Creswell 2014, pp. 14–15). Another reason for the researcher's adoption of such an approach is that the majority of the conceptual and construct components of the study would best fit conceptual elements from both the quantitative and qualitative study designs. This is explained through the researcher's concentration on the elaboration of a concept or thought by investigating its interpretation in relation to other concepts or thoughts. In the case of this study, the researcher expanded on the major research question of the respondents' perceptions of ERM implementation in UAE HIEs by expanding on its conceptual elements of ERM policy application and effectiveness using a questionnaire and interview questions. By doing so, the researcher intended to capture all the major constructs stated in the objectives and research questions of the study, namely *investigating* the effectiveness of ERM implementation in UAE HEIs, as well as *proposing* to present a workable set of guidelines for an effective ERM model, mainly through a quantitative approach and design since the major constructs of the study are already identified.

The explanatory mixed-method design adopted for the study involves quantitative and qualitative data collection and analysis in relation to the discussion of the perceptions offered by faculty members and academic administrators in the context of UAE HEIs. To that end, it mainly relies on the quantitative tool of a survey questionnaire on a high priority basis, and on qualitative research tools of document analysis and interviews on a low priority basis (Creswell & Plano Clark 2011). Figure 3.3 shows how in explanatory mixed-method study design the quantitative portion of the study can be of a higher priority than the qualitative one. This study would deviate from such a design only based on the fact that the researcher did not combine the results, but rather integrated them in the analyses.

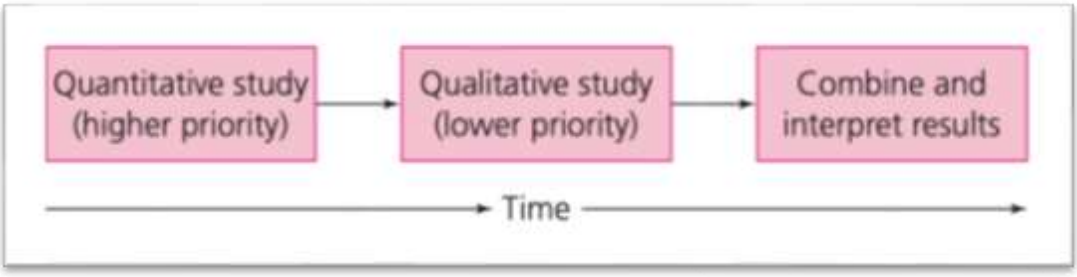


Figure 3.3 – Explanatory Study Design – Adopted from Fraenkel and Wallen (2015, p. 561)

The results of the quantitative phase give direction to the qualitative method, and the qualitative results are used to validate or elaborate on the quantitative findings. In this sense, the analysis of the data in both phases is separate, in the researcher's attempt to investigate the effectiveness of ERM implementation as perceived in the UAE higher education context.

Therefore, while adopting an explanatory mixed-method study design, the researcher gives priority to the quantitative analysis (Creswell & Plano Clark 2011), to answer the major research question (RQ1) quantitatively, and then further qualitatively validate the quantitative data so that a more precise and supportive explanation of the effective implementation of ERM in UAE HEIs is presented and secured (RQ2 and RQ3). The follow-up qualitative study then seeks further explanation of the quantitative findings (Creswell & Plano Clark 2011; Johnson & Christensen 2014). The results from the two stages are integrated at the end to ensure complementarity and integration.

In other words, the explanatory study is proposed to transition the research through a mixed quantitative and qualitative ***phased*** approach, as shown in Figure 3.4.

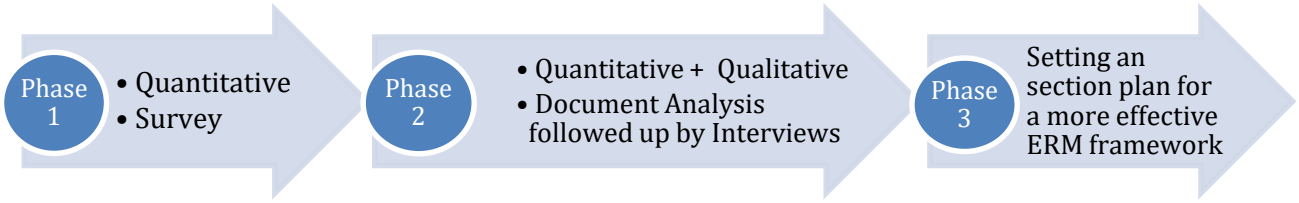


Figure 3.4 – Mixed-Method Study Phased Approach

The quantitative part is the ***first phase*** and the dominant approach to reach answers, and as such findings for the study, where the researcher intends to collect data with the help of a structured survey questionnaire with close-ended questions. To elaborate, for the quantitative part of the research the researcher selected a survey research strategy where a structured questionnaire was designed to be distributed among 1) the selected academic risk management administrators, and 2) the faculty members

and instructors. The survey design of the research has proven to be an ideal tool for the collection of data from a representative sample of the population where key areas of research reliability, credibility and validity can be easily covered and achieved (Yin 2003). The quantitative research approach is the major tool with regards to how the major research question (RQ1) is answered. Even though in the view of Creswell (2014) and Saunders, Lewis and Thornhill (2019) the research design and approach should not be related, the research design would be affected by the research approach being utilised. One positive feature of the survey research strategy is that it helps capture events in a cross-sectional manner without the direct involvement of the researcher or any other person. This ensures the findings are objective since all forms of interference are excluded from the main results and findings, leading to solid conclusions. On the other hand, the ***second phase*** of the study is the qualitative part conducted through document analysis based on the answers obtained from the questionnaire, as well as open-ended in-depth interviews, which would help determine which policies, manuals and procedure documents to analyse, as well as the questions of the in-depth interviews. The document analysis approach is usually used by qualitative researchers as a means of triangulation (Denzin 1970; Bowen 2009; Fraenkel & Wallen 2015). However, in the case of this study, the researcher used the document analysis for both triangulation purposes and as a follow-up phase for the quantitative study, as well as an introductory tool for the qualitative interview phase. In their research, Rossman and Wilson (1985) adopted mixed quantitative and qualitative methods through surveys and open-ended, semi-structured interviews, and combined them with the review of documents as a support for the quantitative data and yet a source for the qualitative data. The qualitative research approach is observed as the supportive tool of the research line with regards to how document analysis and interviews are conducted at the end of the second research phase. The ***third and final phase*** is the outcome of the first two, where the researcher provides a set of workable guidelines for a more effective ERM framework, including workable guidelines that will represent an enhanced version of the existing risk management manuals and policy documents. These proposed guidelines of an enhance ERM framework could be utilised to even suggest a further study and pilot the results in other HEIs in the UAE.

3.4 Study Setting – Site and Context

Engaging with the exact setting of the study, as the researcher did more observation on some HEIs in the UAE, indeed helped the researcher in modifying and adapting the design of the research methodology. There was the need to change some questions based on the level of knowledge awareness and understanding that participants showed through the study, and particularly through the questionnaire piloting stage. The survey, document analysis and in-depth interviews were all conducted by the

researcher in major selected UAE HEIs in Abu Dhabi, Dubai, Sharjah and Ajman: *the UAE University, Khalifa University, Higher Colleges of Technology (HCT), the British University in Dubai (BUiD), Ajman University, University of Sharjah and the American University in the Emirates*. The reason the researcher chose these universities was multi-fold and based on several parameters of selection. These parameters for site selection included whether the institution is government/public or private; the importance and significance of the geographical location in the UAE; the number of programmes accredited by the UAE CAA; the confirmed number of faculty, teaching staff and administrators; the readiness and cooperation exhibited by the volunteer participants, as well as research experts in such institutions; and finally the level of QA, risk management or ERM and ERM framework adoption, implementation and integration as determined by an initial field study conducted by the researcher through informal interviews, web-based searches, telephone conversations and email exchanges.

The CAA accreditation factor is essential to the selection of cases in this study since the focus of inquiry relates only to the institutions that already acquire or exhibit some proven type of QA, risk management or ERM implementation and integration in their academic processes. The institutions selected in this study are among a total number of eighty-one (n= 81) active UAE institutions, as reported by the UAE Ministry of Higher Education in their 2019-2020 statistics book, and more specifically among seventy-four (n= 74) active and licensed HEIs. "As of 2020, there are 74 licensed institutions in the UAE" (CAA 2020, p. 10). The selected institutions are listed in Table 3.2, which shows the information required to indicate the major features and characteristics of the study setting. Such information includes the location of each institution, the type of institution, and the number of accredited programmes as officially acknowledged by the UAE CAA, as well as some statistical information that is useful for the definition of the study population and is considered as the basis of sampling selection. Some of the following information was retrieved from the official websites of the UAE CAA (CAA 2020, p. 23) and the UAE Ministry of Education, while other information was retrieved from the respective websites of each institution, and some facts and statistics were provided by faculty members or administrators by email or telephone after they were contacted by the researcher:

Table 3.2 – Research Sampling Selection Basis

	Name of Institution	***Emirate***	***Public/ Private***	***No. of Accredited Programmes***	***No. of Faculty***	***No. of Admin***
1	*Higher Colleges of Technology (HCT)*	Abu Dhabi, Dubai, Sharjah, Fujairah, Ras Al Khaimah	Public	128	2,065	Unavailable
2	*UAE University (UAEU)*	Al Ain	Public	163	2,542	Unavailable
3	*Khalifa University*	Abu Dhabi	Private	51	1137	Unavailable

4	*The British University in Dubai (BUiD)*	Dubai	Private	59	71	Unavailable
5	*Ajman University*	Ajman	Private	34	906	Unavailable
6	*University of Sharjah*	Sharjah	Private	137	2,032	Unavailable
7	*The American University in the Emirates*	Dubai	Private	27	247	Unavailable

To best explore and answer the questions of the study, the researcher developed a demographic table that describes the personal, professional and demographic information for each participant, in addition to their location (Creswell 2012). The researcher's approach to the demographic information gathering needed to be "especially careful", since the researcher adopted purposive and convenience sampling where the sample tends not to be representative of the population, but rather conveniently selected (Fraenkel & Wallen 2015, p. 99). Compared to the data elicited from CAA (2020), representativeness in this study does not come in numbers but rather based on the criteria of selection. In terms of the choice of faculty members and academic administrators, as will be further explained in next section, sampling was not done randomly, but rather purposively and conveniently of the respondents who have the knowledge and who were ready and willing to answer the questionnaires and interview questions. By carefully and precisely demographically describing each of the participants, their primary professional focus and knowledge of the subject of this study are essential to set the context of the study. Administrators working in academic effectiveness, QA or risk management, as well as educational professionals' and instructors' knowledge and awareness of how their institutions implemented ERM policies and procedures set the basis for data collection and analysis in later sections of the research. The demographic analyses of all participants are utilised later in the analysis of the data collected through questionnaire and interviews.

3.5 Population, Sampling and Sampling Size

3.5.1 Definition of the Study Population and Basis of Selection

The population, being "the group of interest to the researcher, the group to whom the researcher would like to generalize the results of a study" (Fraenkel & Wallen 2015, pp. xxvii & 105), was further defined by the researcher through different levels, moving from the general to the specific. In their analysis of the specification of the study population to which the inquiry is addressed, Cohen, Manion and Morrison (2018) assured that the researcher must make the right decisions, which will affect both the sampling and resources' selection. In the case of this study, the researcher did not have a lot of options for sampling selection given the fact that the population was already identified by the researcher to acquire certain parameters and characteristics, as will be explained in detail in later sections. Cohen, Manion and Morrison (2018, p. 336) asserted that when "the population is readily identifiable… sampling decisions

do not arise". The authors argued that researchers in this case must follow criteria by which populations are specified. In this sense, the researcher followed certain criteria to define the population and later the specific sampling of the study.

In other words, based on the study setting and context of UAE higher education defined in previous sections, and based on convenience and suitability, the population of this study is taken into consideration and defined by the researcher based on three different selection criteria.

The first selection criterion suggests the general population of interest to the researcher under this study to be all the CAA-accredited UAE HEIs in major UAE emirates (Abu Dhabi, Dubai, Ajman, Sharjah, Fujairah and Ras Al Khaimah), acquiring or exhibiting some proven type of QA, risk management or ERM implementation and integration in their academic processes. As shown in Table 3.2, the researcher relied on certain parameters for the selected HEIs based on several factors, as listed and discussed in section 3.4 above. The second selection criterion suggests the actual population in those selected universities to be conveniently targeted by the researcher for the study purpose. Based on this criterion, the general population was narrowed down to be all academic administrators and faculty members of the selected HEIs. However, moving towards the third selection criterion, the researcher narrowed his selection based on what knowledge and professional experience the participants could afford to yield data useful to the research questions. This is typical of the specific population of the study, where the general population was further narrowed down and defined by the researcher to be all the faculty members and senior academic administrators in those major selected academic institutions in the different emirates who exhibit some knowledge of or whose works and professions fall under academic effectiveness, QA and/or risk management categories. In this regard, students (both current and graduate), supporting staff, administrators and faculty members whose positions do not entail any of the major concepts of the study mentioned above were all eliminated from being part of the population of the study. This is referred to by the researcher as "the focused population" (Creswell 2014; Cohen, Manion & Morrison 2018). Adèr, Mellenbergh and Hand (2008) posited that the focused population should be capable of dispensing of information that helps the researcher meet the purpose of the research and provide answers to its questions. For that reason, this focused population of faculty members and academic administrators was targeted by the researcher for the practical reason that they could provide him with the information and data required to answer the three research questions on the effectiveness of ERM implementation in their respective HEIs.

The UAE CAA reported that "[a]s of November 2020, based on the data provided by CHEDS [Center for Higher Education Data and Statistics], there are 18545 faculty members of various disciplines across HEIs in the UAE" (CAA 2020, p. 23). The reasons for the researcher's selection of this focused and narrowed population include the following. First, according to the UAE CAA, the specific population's respective HEIs are known for their accredited programmes in both undergraduate and post-graduate studies, and therefore represent the UAE higher education in a reasonable way since they are ranked as top institutions in each of their respective emirates in the UAE. Secondly, also as per the UAE CAA, the selected population's institutions sustain a good reputation in the research field and accordingly some of their academics have shown interest in the topic of this study, and a willingness to elaborate on it. Third, since the major question of the study is centred around the perceptions of academic administrators and faculty members in the UAE HEI context, the main population of the study was approached as academic individuals who have the expertise as well as the authority position in at least one of the areas of risk management, QA, corporate governance, performance and academic effectiveness. Furthermore, moving to the third criterion, the participants of the study were selected by the researcher to be in two major groups based on their field of knowledge, as well as the daily tasks they are in charge of at their institution. The first was mainly senior academic administrators in charge of the academic effectiveness and related department(s) and accreditation processes, as well as risk management and the QA system of the institution, thus representing those whose professional expertise and knowledge would play a major role in determining the findings in relation to the major constructs of the study. Ten (n= 10) administrators were sought by the researcher from each institution to seek their willingness to participate in the study. The second type of main respondents in this study was resorted to as supportive informants, being the faculty members or instructors in the selected institutions. Likewise, ten (n= 10) faculty members were also sought by the researcher from each institution to seek their willingness to participate in the study. The researcher first contacted the administrators and faculty members from each of the selected HEIs, whose academic profiles show that their academic knowledge and professional designations entail or touch upon academic QA, risk management and effectiveness, bearing in mind their oversight of the identified ERM or risk management programme (with whom the researcher had spoken to previously) in order to seek their consent for participation in the study. After reaching out to a variety of institutions, through phone calls or emails obtained from their websites, certain participants from the institutions (as identified in Table 3.2) responded positively and showed interest in the study, and therefore were selected for inclusion in the quantitative survey study sample, and later to provide material for the document analysis and participants in the qualitative interviews. These participants were selected based on their academic profile available online or provided by reference made by their colleagues, through phone calls

and email exchanges using numbers and emails available on the universities' websites. In this sense, the population of this study of ERM and how it is perceived and implemented in the higher education context were both the academic administrators and faculty instructors in major selected representative UAE HEIs. A larger population of academics, both administrators and faculty members, in other targeted UAE HEIs were also considered for better generalisability of the results and for conducting comparisons of the findings.

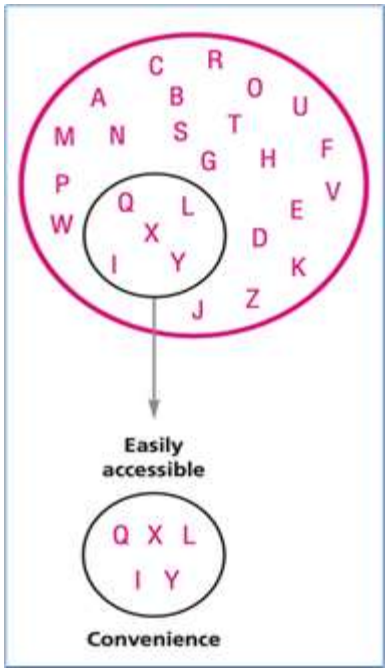
3.5.2 Sampling Selection Technique

To best answer the main quantitative-based question of the study, the researcher targeted faculty members whose views, professional experience and academic performance are indispensable for the process of academic evaluation and assessment and ensuring QA. The researcher also targeted the administrators who are responsible for maintaining the QA and administrative academic effectiveness. These represent the major ***informants*** of this study, as respondents "who are knowledgeable about the subjects" (Fraenkel & Wallen 2015, p. 112). The researcher relied on their knowledge about the subject, and as such the instruments of this study for the quantitatively collected data were primarily focused on these selected informants (Creswell 2014; Fraenkel & Wallen 2015).

The study was conducted in certain major UAE higher education representative public and private institutions. The selection of the sample was from the targeted HEI administrators and professionals, with focus being placed on faculty instructors, representing a population of UAE academic leaders and professionals who would be expert in the field and have broad knowledge of ERM and its effective implementation in their institution. For these reasons, as ***sampling techniques*** the researcher used ***convenience sampling*** for the quantitative survey, and ***purposive sampling*** for the qualitative interviews.

However, the researcher's choice of convenience sampling was made at the level of individual participants only rather than at the group level. In other words, the choice of targeted groups of academic administrators and faculty members came as a result of what researchers refer to as the "purposive sampling" as further explained by the factors determining the basis of selection criteria as defined in Section 3.5.1. Referred to as "judgment sampling", mostly used in qualitative research, purposive sampling in this study describes the choice of group of participants since such groups were purposively "used in order to access 'knowledgeable people', i.e., those who have in-depth knowledge about particular issues, maybe by virtue of their professional role, power, access to networks, expertise or experience" Cohen, Manion and Morrison (2018, p. 219). However, the choice of individual participants was not necessarily purposive since it did not include the deliberate choice of specific participants but

was rather made conveniently based on their availability and rate of responsiveness, as well as due to the qualities that their groups possess. Therefore, since only certain respondents out of the targeted group of participants completed the survey questionnaires, this resulted in a sampling technique that is often described in research as being "purposive".



Convenience sampling is defined as a non-probability type of sampling technique applicable for both qualitative and quantitative studies that require or include descriptive statistical analysis, as is the case with this study. More specifically, convenience sampling is a sampling approach used in research when it is "difficult (sometimes even impossible) to select either random or a systematic non-random sample" (Fraenkel & Wallen 2015, p. 98). Moreover, convenience sampling:

> or, as it is sometimes called, accidental or opportunity sampling, involves choosing the nearest individuals to serve as respondents and continuing that process until the required sample size has been obtained of those who happen to be available and accessible at the time (Cohen, Manion & Morrison 2018, p. 218).

Figure 3.5 – Convenience Sampling Method – Adopted from Fraenkel and Wallen (2015, p. 100)

In fact, from the early stages of the study, the researcher concluded that random sampling was the best choice for his sampling selection based on the nature of the questions and objectives set in the Introduction chapter. However, there are multiple reasons that contributed to the researcher's choice of selecting the convenience and purposive sampling techniques. In addition to the aforementioned definition of convenience sampling, which in itself provides some rationale for the researcher's choice, he opted for this kind of sampling to benefit from the ease of availability of respondents as a determining factor of the researcher's choice, where individual respondents' participation was obtained based on their convenience and availability (Creswell 2014). Realistically speaking, given the special nature of the study topic, setting and context, the researcher found it impossible to reach out to an ideally representative sampling from all purposively selected groups of participants at the selected UAE HEIs. As stated earlier, representativeness in this study does not come in numbers but rather based on the criteria of selection. The choice of the participants for sampling was not done randomly, but rather purposively and conveniently of the respondents who have the knowledge and who were ready and willing to answer the questionnaires and interview questions.

With the spread of the COVID-19 pandemic, it was indeed impossible to reach out physically to any major academic institution for participation approval. All communication and requests were made by the researcher through online and electronic means, and in some cases, approvals for the survey or interviews took almost a year. Therefore, the researcher's adoption of the convenience sampling method was driven by the fact that it was the only possible sampling technique since the researcher intended to use "naturally formed groups" from similar or identical other groups applicable to the general population (Creswell 2014, p. 168). Here is an explanation of what this means to this study. As introduced in the previous section, the researcher based his selection of one hundred and forty (*n= 140*) participants for this study from the general and focused population, to be naturally identified on the basis of their relevant job responsibilities, classification, knowledge of ERM and risk management, and other related area of expertise. In other words, ten (*n*= 10) administrators and likewise ten (*n*= 10) faculty members were approached by the researcher from each institution to seek their willingness to participate in the study. Both groups were drawn from selected public (or federal) and private universities in the UAE. In this sense, "since populations also vary considerably in their accessibility… researchers usually draw a sample from the population to be studied; rarely do they attempt to contact every member" (Cohen, Manion & Morrison 2018, p. 336). In general, and based on the literature, as well as the pilot study and introductory informal interviews conducted by the researcher, all universities in the UAE share similar or even identical populations of diverse and multinational academic faculty members; the differences are mostly in the numbers. They also share relatively similar ERM and risk management programmes applied in their corporate governance system. In summary, the researcher opted for convenience sampling in this study because it caters for the selection of participants based on their availability, knowledge of the research topic, ease of access, suitability for the study research questions, and/or their willingness to participate in the study (Johnson & Christensen 2014).

However, the sample for the qualitative interviews was clearly ***purposive***, another non-probability sampling technique, which was adopted by the researcher to help obtain data from the major respondents. Cohen, Manion and Morrison (2018, p. 219) defined purposive sampling as the non-probability sampling technique mostly used in qualitative research, whereby "in many cases purposive sampling is used in order to access 'knowledgeable people', i.e., those who have in-depth knowledge about particular issues, maybe by virtue of their professional role, power, access to networks, expertise or experience". The researcher averted convenience sampling in this phase of the study in order to make the "best judgement" by selecting those interviewees who would provide sufficient and useful information on the sub-research

questions (RQ2 and RQ3). Fraenkel and Wallen (2015, p. 99) emphasised the fact that "Purposive sampling is different from convenience sampling in that researchers do not simply study whoever is available but rather use their judgment to select a sample that they believe, based on prior information, will provide the data they need". Additionally, part of the justification of the use of this sampling technique for the interviews is that a very specific group of respondents had to be "chosen to be able to help the explanation and elaboration of the quantitative data" (Cohen, Manion & Morrison 2018, p. 45). In the case of this research, the researcher purposively approached five interviewees from the selected universities based on their professional experience and knowledge about the subject of ERM. The researcher chose the interviewees not only to help provide explanation of the quantitative data, but also to inform it in some phases of the study since parts of the survey questions were intended to answer questions similar to the interviews.

However, speaking of the limitations of each of the above-mentioned sampling techniques, research scholars have already defined some major issues. Educational research has identified two major setbacks with the convenience technique of sampling. One is that related to the justifiability of site selection. Convenience sampling often lacks the justification for that kind of selection, where the resulting data are often isolated from the particular site context (Walford 2001). Additionally, the "opportunity to participate is not equal for all qualified individuals in the target population and study results are not necessarily generalizable to the population" (Etikan, Abubakar & Alkassim 2016, p. 4). Another disadvantage of convenience sampling is the fact that it gives room for respondents' biased participation (Christensen & Johnson 2014). Fraenkel and Wallen (2015, p. 99) supported this fact by stating that convenience sampling "has a major disadvantage in that the sample will quite likely be biased". This disadvantage will be referred to as one of the limitations of the study. In other words, it gives room for respondents' bias and subjectivity when sharing their data and information, a research-related risk that the researcher aimed to mitigate by using certain validity and reliability checks mentioned in detail in a later section of this study. Two ways of mitigating this risk is that the researcher firstly included all the demographic details and characteristics of the sample chosen, and secondly the researcher "replicated" the same study by repeating the questionnaire and interviews with similar samples from the different universities to increase the generalisability of the results and decrease the likelihood of their one-time occurrence (Fraenkel & Wallen 2015, p. 99). With purposive sampling, there is also the possibility of the error of judgment and bias since the researcher is relying on the judgement and statement of the participants selected. "The major disadvantage of purposive sampling is that the researcher's judgment may be in error – he or she may not be correct in estimating the representativeness of a sample or their

expertise regarding the information needed" (Fraenkel & Wallen 2015, p. 99).

3.5.3 Sampling Size

Since the researcher used the convenience and purposive sampling techniques the ***sample size***, for both the questionnaire and interviews, varied and depended on the availability of respondents, as well as their significance and scale of contribution to the study objectives as set by the researcher. Therefore, to ensure the generalisability and representativeness of the sample, the researcher tried to take into account the general and focused population size referred to in section 3.5.1. The sample of the quantitative study was meant by the researcher to be (*n*= 140) but consisted of actual and confirmed (*n*= 101) respondents, out of which five were used for the interviews, purposively selected from the total focused population of academic administrators and faculty instructors of representative UAE public and private HEIs. The targeted sample size of the quantitative survey was distributed among the selected HEIs as shown in Table 3.3.

Table 3.3 – Targeted Sample Size Selection

	Academic Administrators	***Faculty Members***
HEI 1	10 participants	10 participants
HEI 2	10 participants	10 participants
HEI 3	10 participants	10 participants
HEI 4	10 participants	10 participants
HEI 5	10 participants	10 participants
HEI 6	10 participants	10 participants
HEI 7	10 participants	10 participants
Total	140 participants	

The sample size of the quantitative section was originally intended by the researcher to be one hundred and forty (*n*= 140) respondents of both academic administrators and faculty members. However, because the researcher based his sampling in this study on convenience, the actual survey phase showed a varying rate of participation from each of the selected universities. This variation resulted in the actual total number of complete returned responses being the responses of (*n*= 101) participants from all selected public and private institutions. One of the major selected institutions (HEI 6) responded positively by distributing the survey to one hundred and six (*n*= 106) QA, accreditation, risk management and programme team leaders, out of which the researcher obtained only 15 completed responses. The total number of (*n*= 101) respondents can be considered as representative of the population of academic administrators and faculty members in the major HEIs in the UAE when considering the different selection criteria set by the researcher in sections 3.5.1 and 3.5.2. In addition, it is a conveniently planned number based on the recommended sample size of the academic population (Johnson & Christensen

2014). The process used for the sample selection was set as being ten academic administrators and ten faculty members from each of the targeted institutions.

For the qualitative research section, two types of samples were found to be required. The first was the same 101 respondents of the quantitative survey whose responses led to the resulting data of the document analysis and interviews. The second type was a small portion of five respondents out of the 101, selected based on the purposive sampling technique explained earlier (Johnson & Christensen 2014; Fraenkel & Wallen 2015). Therefore, from the total of 101 respondents, the interviews were conducted with three (n= 3) administrators and two (n= 2) faculty members from the selected universities, who were introduced to the researcher and were willing to participate in this study. Realistically, the qualitative phase of the research could still be conducted if only three academic administrators agreed to participate in the interviews, since this was the secondary qualitative phase of the study that focuses on a supportive description of the risk management practices and effectiveness in the selected academic institutions.

However, as advised by Saunders, Lewis and Thornhill (2019), it is also essential to consider the sampling error, which is identified throughout the data collection and analysis. Therefore, since the researcher adopted the convenience and purposive sampling techniques as shown above, determining the final and actual sample size of the study came at a later stage.

3.6 Data Collection Instruments

Creswell (2014), like all other prominent research theorisers, posited that an explanatory mixed-method study would rely on stating and investigating the research problem through quantitative tools such as survey questionnaires, followed by validating the findings through qualitative tools such as document analysis and in-depth interviews.

3.6.1 Overview of the Data Collection

As indicated in the Introduction chapter, the study questions consisted of major quantitative survey questions that directly touch on the main objectives of the research, and other qualitative questions to be answered through qualitative tools to support the findings of the survey. Additionally, and as stated earlier, before both groups of questions were answered, defining the participants' demographic data was conducted. The survey questionnaire was conducted to answer the two categories of questions in three major sections. *Section one* was designed in relation to ERM adoption (Group A questions), to obtain information pertaining to the participants' perceptions of the adoption and implementation of ERM in general and how they describe the steps institutions take to implement effective ERM practices in their

HEIs. *Section two* consisted of structured questionnaire questions related to the effectiveness of ERM adoption and implementation (Group B questions), dealing with the participants' perceptions of the effectiveness of adopted and implemented ERM policies. *Section three* covered the integration of ERM policies into HEIs (Group C questions) and touched on the main aspects of the integration of currently implemented ERM standards, guidelines, and policy and procedure documents, leading to informed data on what documents would be analysed in the next phase of the study, that is, the document analysis. For the second section, descriptive statistical data analysis methods and non-parametric tests were also used to help the answers of the structured questionnaire guide the document analysis phase.

The questionnaire was developed based on key concepts and terminology surrounding the major concepts and constructs of the study. A considerable number of the survey questions were based on risk maturity testing (Q18 to Q34). The researcher planned these questions in particular in a way to provide evidence regarding how the selected respondents of HEIs view the ERM maturity of the ERM programme at their institutions. The quantitative results were then used to "plan the qualitative follow-up" study (Creswell 2014, p. 224). The researcher planned to distribute the questionnaire using an endorsed and adopted survey platform. The study data analysis in relation to the major research questions was centred around the primary data and numbers obtained using the questionnaire. This was followed up by a process of data feedback and analysis using the Statistical Package for the Social Sciences (SPSS) software. The data and numbers obtained through SPSS were then migrated into Microsoft Excel sheet and Microsoft Word documents to formulate the findings of the study. The reliability or internal consistency and validity were ensured while analysing the questions of the survey by way of conceiving major responses to each research question in the study (Creswell & Creswell 2018; Saunders, Lewis & Thornhill 2019). The Cronbach's Alpha test was also used during the pilot study phase to guarantee the internal validity and consistency of the survey questionnaire items by concluding that all items of the questionnaire are required and that removing or discarding any of those items would change the results and impact their consistency. In that sense, the Cronbach Alpha test proved that the items shared "covariance" and measure the same "underlying concepts" (Cohen, Manion and Morrison 2018).

As for the collection of the qualitative supporting data, which had a lower significance and importance to the study, document analysis was conducted through thematic coding and categorising, and content analysis, as well as interviews targeting at least five interviewees from the selected HEIs, by way of answering RQ2 and RQ3 of the study. This was conducted in different sessions over different time intervals after securing all required approvals from both the researcher's university and the targeted HEIs.

As mentioned earlier, the questionnaire answers were combined with the review of documents as an intermediating phase to support the quantitative data and yet provide a source for the qualitative data conceived through interviews. Since, according to Cohen, Manion and Morrison (2018, p. 506), "interviews enable participants – interviewers and interviewees – to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view", the responses obtained from interviews were relied on as the main source of informative data under this study. Faculty stakeholders including faculty members and administrators were interviewed in separate 45-to-50-minute sessions. The interviews, as mentioned earlier, were semi-structured and audio-recorded (some were both audio and video recorded) and conducted based on an interview schedule. In the schedule, interview prompts (Appendix 3) were designed to obtain detailed verbal descriptions of how the suggested risk-based policies and procedures may be utilised by the faculty members and administrators to evaluate and affect their academic performance and boost their institutional QA. The basic format of interview questions for the administrators and faculty members relied on information taken from the demographic analyses of all participants.

3.6.2 Quantitative Instruments – Questionnaire

Since this study starts with the quantitative phase with a 'high priority' (see Figure 3.2), the survey data collection design is the major research design adopted by the researcher to obtain cross-sectional and at the same time descriptive results and data from the selected population of academic administrators and faculty members. Descriptive surveys in the form of close-ended questionnaires are common in educational research where the intention of the researcher is to simply describe the characteristics of a sample, particularly faculty members, instructors and administrators in charge of ERM in selected UAE HEIs, at a specific point in time (Mertens 2005; Creswell 2014; Cohen, Manion & Morrison 2018; Saunders, Lewis & Thornhill 2019). The researcher mainly focused on the descriptive ***survey instrument***, through a ***structured questionnaire***, as the basic instrumentation to collect the quantitative data. As stated by Fraenkel and Wallen (2015, p. 21), "survey research involves describing the characteristics of a group by means of such instruments as interview questions, questionnaires, and tests". The reason a ***questionnaire*** was used in support of the quantitative portion of the study in a cross-sectional manner is that a "survey will be conducted to determine whether the information found is more generalisable or specific to certain unique corporations" (Saunders, Lewis & Thornhill 2019, p. 115). Creswell (2014) strongly posited that answering questions through surveys (i.e., questionnaires) is the ideal way to obtain quantitative results.

Throughout the initial phase of the quantitative study, the researcher initially aimed to collect results from 140 survey respondents. However, due to the limitations identified in detail in a later section of this thesis, the number of possible and confirmed survey responses went down to 101. The survey was based on a questionnaire conducted on the same topic in several USA universities and administered to 140 respondents (Lundquist 2015). Even though the tool proved to be valid and reliable, the researcher revised some of questions and ran them through a piloting test process with some major respondents in order to enhance the validity and reliability of the survey tool and obtain better results suitable to the UAE higher education context.

How the questions of the survey questionnaire were determined by the researcher is accounted to by two factors. One is reliance on previous literature in the field where the overall structure and some questions of the questionnaire were inspired by studies such as Lundquist (2015), Deck (2015), and Eryilmaz (2018). The second factor is that the research questions and objectives of the study contributed to determining the nature of questions as well as their structure. In practical terms, this was interpreted in the way the researcher structured the survey questions as follows: The structured questionnaire consisted of seven (*n*= 7) demographic questions and thirty-two (*n*= 32) major questions which were directed to 140 participants from the selected UAE HEIs, designed in such a way as to group the questions in accordance with their thematic content and the two targeted groups of participants, as well as to relate their answers to the research purpose and questions. Survey Items 18 to 34 were survey-based and perception-centred statements of risk maturity testing in the context of a risk maturity model's (RMM) adoption and utilisation (from *initial* to *very mature*), "developed based on a review of risk maturity models and using elements of ISO 31000 regarding culture and maturity to form the statements" (Lundquist 2015, p. 71).

Survey Items 18 to 34 were directed to the respondents to select an answer from A (*initial*) to D *(very mature*) showing four different levels of maturity towards one aspect of the ERM process and effectiveness. Related to the first and major research question (RQ1), the questions of the questionnaire were set by the researcher to be in three interconnected groups based on their major thematic categories. Group A questions (see Table 3.5) utilised the Likert-based style in an attempt to measure and focus on the faculty members' and academic administrator participants' perceptions of risks in their institutions, and how they are being identified, classified and managed in relation to their quality, accreditation and academic performance processes. The other part of the first group questions sought to get responses from the participants on the effectiveness of ERM implementation in their HIEs (*ERM Adoption and*

Implementation). Group B questions (see Table 3.5) were directed at the participants comprising of faculty members and instructors in the selected HEIs to seek their perceptions and responses on, as well as involvement in, the effectiveness of ERM adoption and implementation in their academic institution (*Effectiveness of ERM Adoption and Implementation*). Group C questions (see Table 3.5) were directed to the participants by way of seeking to obtain their perceptions and feedback on the already-implemented ERM policies and guidelines adopted in their institutions, and how effective they may be in relation to their academic institution (*ERM Integration*). The questionnaire was first piloted among a convenience-based distributed sample of one (*n*= 1) participant from each university to check their reliability and make enhancements and changes to the questions based on the respondents' feedback and responses. The revised and finalised questionnaire was then administered online with the targeted respondents. Table 3.4 shows how the quantitative data collection process was performed by the researcher.

Table 3.4 – Quantitative Data Collection Process

Step No.	*Description*
Step 1	Drafted questionnaire based on previously tested research and major respondents' feedback
Step 2	Piloted and tested the survey instrument
Step 3	Revised and refined the survey instrument based on the pilot test
Step 4	Administered the online survey instrument

The survey questionnaire was run through the SurveyMonkey application and targeted 140 academic administrators and faculty members *conveniently* selected from their HEIs. The participants were selected on the basis of either their risk management responsibility at the HEIs or their knowledge and awareness. They were asked questions about their perceptions regarding the effectiveness of ERM implementation processes at their institutions, as Table 3.5 shows.

Table 3.5 –Responses Sought from the Survey Questions

Survey Questions	***Respondent Perceptions Targeted***
Group A Questions ***(ERM Adoption)***	*The participants' perceptions of the nature of ERM adoption in their academic institution; also directed towards the participants' knowledge and awareness of the steps taken at their institutions for the identification, implementation and evaluation of ERM practices*
Group B Questions ***(Effectiveness of ERM Adoption,***	- *The participants' perceptions of and involvement in the effectiveness of ERM adoption and implementation in their academic institution, and*

Implementation & Integration)	- *testing the maturity level of the respondents' HEIs regarding the application, implementation and integration of ERM framework and concepts*
Group C Questions ***(ERM Integration)***	*The participants' perceptions and feedback on the already-implemented ERM policies and guidelines adopted in their institutions, and how effective they may be in relation to their academic institutions*

The responses from the survey participants were then turned into statistical data and analysed using descriptive statistical analyses and non-parametric data test procedures, by running them through the specialised statistics application instrument of SPSS, as will be further explained in Section 3.8.1.

3.6.3 Qualitative Instruments – Document Analysis and Interviews

For the qualitative phase of this study, the data were collected through document analysis and face-to-face video-recorded ***semi-structured interviews*** with some targeted key informants from the selected HEIs. It is common in mixed-method research to utilise both document analysis and interviews. Since the study is a mixed sequential study, both the questionnaire and interview schedule represent "basically the same kind of instrument – a set of questions to be answered by the subjects of the study" (Fraenkel & Wallen 2015, p. 119). The only difference between them is in fact how these two instruments yielded different but complementary results convenient for the type of research questions of each stage of the study (RQ1, RQ2 and RQ3).

3.6.3.1 Document Analysis

"Organisational and institutional documents have been a staple in qualitative research for many years" (Bowen 2009, p. 27). Bowen (2009, p. 27) defined ***document analysis*** as "a systematic procedure for reviewing or evaluating documents – both printed and electronic (computer-based and Internet-transmitted) material". The reason the researcher opted for this additional instrument layer in the qualitative study, in combination with interviews, was to draw upon more extended sources of evidence by means of "triangulation". By triangulating data, the researcher provides "a confluence of evidence that breeds credibility" (Eisner 1991, p. 110) The themes and data obtained from the document analysis informed the researcher on the current status of risk management and ERM policies and manuals' applicability and integration into the targeted HEIs' academic processes. Bowen (2009, p. 28) provided an example of research, where "Rossman and Wilson (1985) combined quantitative and qualitative methods—surveys (to collect quantitative data) and open-ended, semi-structured interviews with reviews of documents (as the primary sources of qualitative data)". In this sense, document analysis also enabled

the researcher to substantiate and evidence the data collected from the participants through questionnaires. The review of documents also provided the researcher with the opportunity to utilise existing information to support the answers to the research questions, as well as to triangulate the survey data. It specifically supported the answers provided by respondents to the major research question (RQ1), where it informed the researcher of the development, applicability and integration of risk management policies in the selected HEIs.

Data elicited from document analysis is then combined with data from the interviews "to minimise bias and establish credibility" (Bowen 2009, p. 38). The document analysis in this study was conducted on the available and accessible risk management documents and related academic effectiveness policies obtained from two sources: the risk management and ERM policies and bylaws publicly available on the websites of UAE higher education authorities and agencies such as the UAE CAA 2019 *Standards,* and the risk management and ERM policies and manuals applied by some of the targeted HEIs. The thematic categories elicited from the analysis of those document would include the three major conceptual areas that comprise the subject of this study: ERM adoption, ERM implementation and ERM integration. They also provided informed insight into what areas the academic stakeholders in the UAE need to improve on in order to improve and sustain the effectiveness of ERM integration into their existing policies. Despite all the limitations of the document analysis research process, such as the difficulty of access as well as the difficulties arising from the confidentiality of the documents, this approach derived value in the study from the fact that it enabled the researcher to obtain written evidence, which saved time and expense in transcribing extended interviews with the participants when asking them for full details of their existing and applicable ERM policies and manuals.

3.6.3.2 Semi-Structured Interviews

In their definition of ***interviews*** as a qualitative research instrument, Cohen, Manion and Morrison (2018, p. 506) posited that "the interview is a social, interpersonal encounter, not merely a data-collection exercise". The authors also went beyond that by quoting Hochschild (2009) on the notion that interviews "can do what surveys cannot, which is to explore issues in depth, to see how and why people frame their ideas in the way that they do, [and] how they make connections between ideas, values, events, opinions, behaviours, etc." (Cohen, Manion & Morrison 2018, p. 506). In this sense, the researcher used the interviews in order to add more insights to the findings of the questionnaire.

The questions in the ***interview schedule*** (Appendix 3) were drafted based on the research questions, as well as the findings from both the questionnaire and document analysis (Fraenkel & Wallen 2015, p.

119). The interview questions were shared with the interviewees before the agreed interview time for awareness and research ethics' considerations. The interview instrument was designed to answer not only RQ3, but also to partially answer the major RQ1, Group C questions. In fact, the Group C questions in the questionnaire were designed by the researcher and directed to the respondents to obtain their perceptions and awareness of the already-implemented ERM policies and manuals adopted in their institutions. In doing so, two informal pilot interviews with two expert faculty members in the fields of QA and ERM were conducted using an electronic recording device. The interviews were later revisited and reviewed to identify areas of enhancement and change for the interview questions. It was found by the researcher that the respondents' time was a sensitive factor, and therefore the length of the interviews would need to be modified depending on the interviewees' time and availability. The researcher therefore decided to shorten and decrease the number of questions. Each one of the two pilot interviews took almost 50 minutes to complete, where it was the researcher's intention to spend one hour with each of the interviewees. Other than the lesson learnt regarding time management, the researcher gained other insights from the pilot interviews in terms of the more important areas to focus on when posing the questions, such as the quality of the questions, the wording, the use and understanding of terms and concepts and how they fit into conceiving better and more reliable findings with regards to RQ3 in particular.

The interview schedule helped the researcher clarify questions to the interviewees and expand on answers. The researcher phrased ten interview questions so that the answers fell into certain categories and themes that would fulfil the researcher's objectives in answering two of the research questions of the study (partially RQ1, and fully RQ3). The face-to-face interviews were conducted in a way to purposefully select the site of the participants who were conveniently selected for the interviews, where the number and difference of sites would be an issue (Creswell 2014, p. 189). The interviewees included five key respondents (three risk management administrators and two faculty members), identified by the researcher on the basis of the convenience sampling and selected based on their availability, as well as their profound knowledge in the field. The number of interviewees could have ranged between 10 and 20 in order to achieve what Mason (2010) referred to as the "saturation level". However, through the analysis of the five interviews conducted by the researcher, it became evident that the majority of codes and themes elicited from these five interviews were repeated with indication to similar results. Additionally, due to the fact that this study started with the quantitative data collection and analysis with a higher priority, the number of interviewees was reduced to five given that the qualitative responses were not the major data source to conceive the findings in this study but were rather a supporting tool

only. The interviews involved semi-structured and "generally open-ended questions that are few in number and intend to elicit views and opinions from the participants" (Creswell 2014, p. 190). The faculty members and risk management administrators were then requested to answer ten (*n*= 10) open-ended questions (Appendix 3), to identity the existing ERM and/or QA policies and process applied in their respective institutions, and to define their perceptions regarding the effectiveness of their current and existing ERM and/or QA policies and processes. The interviews were conducted using an electronic device with recording capability, as well as online video call and online meeting applications (i.e., Microsoft Teams and Zoom) after getting consent from the interviewees. The researcher also asked the questions orally, with the answers recorded and then coded in writing at a later stage. All the interviews were conducted in the English language, and then transcribed verbatim by the researcher into archived texts.

The main themes that informed the interviews were very similar to the themes that informed the process of document analysis, since both phases of the study were directed to answer the same research questions. The thematic categories derived from the interviews covered the three major conceptual subject areas of this study: ERM adoption, implementation and integration, as reflected and practised in the available ERM policies and manuals in the respective HEI. Added to these themes, the major RQ1 also informed the researcher of the requirement to gather perceptions from the study respondents on their existing ERM and/or QA policies and processes, and how they are using them as indicators of the effectiveness of their academic processes.

3.7 Reliability, Validity and Trustworthiness

Johnson and Christensen (2014) stated that according to Smith (1984), the principles of reliability and validity as research criteria are not particularly related to qualitative research, logically suggesting that they are more related to quantitative research. Since the major RQ1 is mainly answered through quantitative tools, the researcher's adoption of reliability and validity strategies to validate and test the reliability and validity of data would be conducted at a considerably justified scale. Cohen, Manion and Morrison (2018, p. 250) argued that even though "each of the methods in mixed methods research (MMR) has to conform to its specific validity requirements in quantitative and qualitative research, there is an argument for identifying specific validity requirements for MMR", referred to as "legitimation". The authors quoted nine types of validity legitimation in mixed-method research, of which the researcher adopted "multiple validities", defined by Cohen, Manion and Morrison (2018, p. 251) as "fidelity to the canons of validity for each of the quantitative and qualitative data gathered". The reasons for the

researcher adopting this validation strategy were *first* to give the researcher freedom to reflect on the validity of each method instrument on its own, and *second* because the study's main purpose as well as the major RQ1 are addressed and answered mainly through a quantitative tool and deal with numbers as predetermined facts. This gave the researcher more freedom to focus on quantitative validity. Additionally, this study is mainly deductive and objective in nature, where the researcher's reliance on numbers and statistics is a crucial factor to the findings of the quantitative study, whereas the instrumentation and findings of the qualitative study suggest different kinds of "credibility and confirmability" criteria (Cohen, Manion & Morrison 2018, p. 248).

3.7.1 Quantitative Data Reliability and Validity

For the quantitative data, relying on *multiple validity* techniques and tests, the researcher used ***reliability***, which means that the research approach adopted by the researcher is consistent across different research and projects (Gibbs 2007; Creswell 2014). According to Cohen, Manion and Morrison (2018, p. 245), reliability is inherent in questionnaires as an instrument of quantitative data collection, providing the questionnaire with an advantage "over interviews, for instance", since it tends "to be more reliable; because it is anonymous, it encourages greater honesty". As defined by Fraenkel and Wallen (2015, p. 154), ***reliability*** is "the consistency of the scores obtained – how consistent they are for each individual from one administration of an instrument to another and from one set of items to another". According to them, data are considered reliable if others using the same data collection method at different times but under similar conditions would get the same results (Ibid., p. 145). In this sense, in this study reliability is achieved when examining and comparing the results of the data analyses first from the perspective of different HEIs as the subject of this study, and second from the perspective of two different layers of respondents, namely the academic administrators and faculty members. However, since this study does not involve empirical tests, hypotheses or experiments, reliability in the standard sense of testing the "consistency or stability of test scores" is not used (Creswell 2014, p. 155). In the quantitative phase of the data collection, the researcher relied mainly on the reliability of the scores and numbers obtained from the questionnaire in order to obtain meaningful interpretation of the data (Ibid.).

As stated earlier, the researcher adopted multiple validity strategies to validate the instrument reliability and findings' validity of each of the two major phases of the study. Defined by Cohen, Manion and Morrison (2018, p. 245) as "a demonstration that a particular instrument in fact measures what it purports to measure", the ***validity*** of quantitative data in this study is tested through different means, the most important of which is reliance on a similar survey tool from previous proven research, as mentioned

earlier in the study. The questionnaire used in this study was based on a survey that was tested, proven valid and conducted in the field of ERM in several United States of America (USA) universities, and administered to 124 respondents by Lundquist (2015). The questions in the questionnaire were modified from this study, which showed reliable results with regards to the maturity levels that indicate the significance of ERM adoption and implementation in USA HEIs. Lundquist's (2015) results relied on data coming from thirty-seven (*n*= 37) administrators from the different universities who responded positively to the majority of the questionnaire items. The results indicated that the majority of her questionnaire items (*n*= 15):

> were rated in the second maturity level, ranging from 2.0 to 2.7. Items in the higher end of the developing level (2.5 – 2.7) indicate that IHEs are experimenting with ERM and that the risk strategy and framework is still under development. While senior administration and boards have an awareness of risk management, the understanding of risk management is limited to a small number of experts on campus who see risk management as essential to achieving the IHE's objectives (Ibid., p. 86).

The researcher revised some of the items in the questionnaire and ran them through a pilot test procedure with some major respondents in order to enhance the validity and reliability of the survey tool and obtain optimal results convenient for the UAE higher education context. For example, Lundquist (2015, p. 82) asked the following open-ended question in the context of her quantitative survey: "how do you know if implementation of the ERM framework has reduced, mitigated, or controlled risk, created opportunity, enhanced financial viability and/or resulted in other positive factors?". Whereas the researcher, upon consultation with the expert respondents during the pilot study, proposed to move this question to the interviews (Interview Q7) based on the fact that it is open-ended and suited the qualitative inquiry more than the quantitative. Other similar examples are identified in moving or removing some of the questions used by Lundquist (2015) in the survey, which were identified by the researcher to be more of the qualitative type than suitable for a quantitative research instrument. One example is Q49, where Lundquist (2015, p. 193) asked the respondents to "list other higher education institutions with ERM programs with whom [they] have consulted or collaborated in the development of [their] ERM program". Other means of validity checking included careful sampling, appropriate instrumentation and "appropriate statistical treatments of the data" during the data analysis stage (Cohen, Manion & Morrison 2018, p. 267). These appropriate statistical treatment measures used by the researcher included using the appropriate sample by focusing on their professional expertise and knowledge repository, and hence avoiding using inferential statistics for this type of research question since no inferences, hypotheses or assumptions, or causal relations were included or discussed by the researcher. The researcher based his sample and data collection instrumentation, as well as data analysis techniques, on the premise of avoiding inferences or generalisations beyond what the provided data might be capable of in supporting

the findings of the study. The researcher started by checking the validity of the questionnaire through piloting among a convenience-based distributed sample of one participant from each selected HEI to check, as stated before, the instrument's reliability and make enhancements and changes to the questions based on respondents' feedback and responses.

Ridenour and Newman (2008) stated that establishing validity in mixed-methods research would involve connecting the research purpose, questions, and methods to reach what they called "the truth value". This connection of the research purpose, questions and methods was taken into careful consideration throughout the study when the researcher based the questionnaire instrument (as well the interviews) on the research questions (RQ1, RQ2 and RQ3), as well as the Conceptual Framework adopted by the researcher (ERM Adoption–Implementation–Integration–Effectiveness). However, the validity of scores is essential to quantitative research: "As with all mixed methods studies, the researcher needs to establish the validity of the scores from the quantitative measures and to discuss the validity of the qualitative findings" (Creswell 2014, p. 225). The validity of the scores obtained from all completed questionnaires, as well as the validity of the questionnaire itself as an instrument, was checked through means of content validity and internal and construct validity checks.

For quantitative data, the internal validity is essential to determine the soundness of the conclusions and numbers reached in the quantitative study by checking that the concepts being studied are accurately measured (Fraenkel & Wallen 2015). To achieve that, the researcher conducted the **Cronbach's Alpha** test several times and revised the questionnaire items until the internal validity and consistency of the survey questionnaire items were achieved and guaranteed. Cohen, Manion and Morrison (2018, p. 270) defined Cronbach's Alpha as "an alternative measure of reliability as internal consistency is the Cronbach alpha, frequently referred to simply as the alpha coefficient of reliability, or simply the alpha". In other words, the Cronbach Alpha test proved that the scales of items of the questionnaire shared "covariance" elements and tended to measure the same "underlying concepts" (Cohen, Manion and Morrison 2018). After several revisions of the survey instrument, the Cronbach's Alpha value in this study was equal to (0.**823**), which according to educational and science researchers means the items of the questionnaire are highly reliable and as stated share covariance elements as well as tend to define the same underlying concepts (Fraenkel & Wallen 2015; Cohen, Manion & Morrison 2018):

Table 3.6 – Reliability Test Results of the Questionnaire

Reliability Statistics	
Cronbach's Alpha Coefficient	No. of Items
.823	**32**

The researcher also relied on previously attested and accredited research and studies in the field as a major source of questionnaire items, and then piloted the questionnaire in order to seek specialised feedback and improvements. The researcher searched closely to see how some components might be drawn on from different validated questionnaire instruments to build the reliability and validity case for the study.

3.7.2 Qualitative Data Validity and Trustworthiness

For the qualitative data, the researcher used content validity (Johnson and Christensen 2014; Cohen, Manion & Morrison 2018) to test if the document analysis and interview data were "plausible, credible, trustworthy, and therefore defensible" (Johnson & Christensen 2014, p. 207). Defined by Fraenkel and Wallen (2015, p. 148) as "the appropriateness, correctness, meaningfulness, and usefulness of the specific inferences researchers make based on the data they collect", the ***validity*** of the data collected through qualitative instruments achieves meaningfulness in the trustworthiness of the respondents' responses. The researcher's adoption of these techniques was in a sense driven by the fact that, as a researcher, there is always the need to endeavour to perfect the study and culminate its findings by not only testing the quantitative internal validity of numbers, but also the trustworthiness factors of qualitative data.

As stated earlier, the qualitative phase of this study relies on triangulation for data validity purposes, where the researcher attempted to provide "a confluence of evidence that breeds credibility" (Eisner 1991, p. 110). Johnson and Christensen (2014) argued that one of the most important reasons why some qualitative research is better than other qualitative research is the adoption of reliability and validity in the former, and their absence in the latter, whereby "most qualitative researchers argue that some qualitative research studies are better than others, and they use the term validity or trustworthiness to refer to this quality difference" (p. 298). In this study, the researcher used two tests to check on the validity of the qualitative data: *interpretive validity*, "portraying accurately the meanings attached by participants to what is being studied by the researcher" or what is called the deductive method of data interpretation, and *participant feedback*, "discussing the researcher's conclusions with the study participants", as techniques to assure the validity of data is adhered to (Johnson & Christensen 2014, p. 300). While carrying out the former technique, the researcher managed to understand the inner world and minds of the academic participants, interpreting their reactions and responses to the interview questions, discussions and observations, and reflecting them through themes and categories in the analysis report. For the latter, the researcher shared the questions of the interviews for review and feedback by two expert participants to ensure their validity. The researcher also shared with the expert participants his viewpoints

and interpretations from previous literature and theoretical reviews about the subject in order to seek and obtain their tested feedback and experiences, and thus enhance the questions of the study for better answers.

Strauss and Corbin (1998) and Fraenkel and Wallen (2015) used the term ***trustworthiness*** in qualitative studies to refer to both the *creditability* and *validity* of qualitative data. "Trustworthiness and its components replace more conventional views of reliability and validity" (Cohen, Manion & Morrison 2018, p. 279). Several strategies were adopted in the data analysis process to enhance and boost the strength and trustworthiness of the document analysis and interview findings. In order to test the trustworthiness of the questions in the interviews, the researcher sought the review and advice of some informed risk management practitioners and professionals from outside the academic field, who functioned as external validators.

In summary, the researcher used multiple and different measures to enhance the reliability and validity of the study. These measures included the adoption and application of the most notably recognised research methodology (mixed-method approach), the inclusion of and reference to previous proven studies using the same mixed-method research design and conducted in multiple contexts, a reference to the opinion of a group of respondents experts in the field of ERM and academic effectiveness, and finally the comparison of the findings of this study with existing literature and established theory (Miles, Huberman & Saldaña 2014).

3.8 Analysis Methods Implementation

3.8.1 Quantitative Data Analysis

Since this study adopts the explanatory mixed-method design as a research approach, the quantitative and the qualitative data were analysed separately (Creswell 2014). More specifically, both analyses were done in a follow-up manner. In other words, after obtaining the quantitative data, the researcher first conducted a reporting process of the quantitative results by reporting on the total size of the sampling and results, and then on the percentage of returns, as well as the percentage and frequencies of respondents who chose to answer each category of the questions (Fraenkel & Wallen 2015, p. 404). The researcher conducted ***descriptive statistical analysis and non-parametric tests (Mann-Whitney test)*** of the quantitatively obtained data given that the type of data resulting from the survey questionnaire are neither randomly obtained nor normally distributed and therefore do not carry the characteristics of quantitative parametric data (Field 2009).

The data analysis method used in the quantitative section is mainly descriptive statistical in nature. Descriptive statistical data analysis suits the nature of survey convenience sampling and allows the researcher to describe the information contained in and obtained from scores and numbers (Fraenkel & Wallen 2015). This is typical of the overall data analysis in the quantitative section of the study. "Sometimes simple frequencies and descriptive statistics may speak for themselves, and the careful portrayal of descriptive data may be important" (Cohen, Manion & Morrison 2018, p. 727). The researcher aimed to follow this data analysis design in order to "describe, summarize, or make sense of a particular set of data" (Johnson & Christensen 2014, p. 528). In this sense, in order to answer RQ1, the researcher arranged the data obtained from the questionnaire in more interpretable formats, such as frequency distributions, defining the mean and median, and including visually illustrated figures, bar graphs and descriptive charts and tables for better interpretation and representation of the data.

For the analysis of the quantitative data obtained from the questionnaire, the researcher used several descriptive statistical concepts and tests devised from SPSS, since SPSS "can generate results and report them back to the researcher as descriptive statistics or as graphed information" (Creswell 2014, p. xx). The descriptive statistical analysis included the mode, the mean, the median, the minimum and maximum scores, the range, the variance and standard deviation, and the standard error. Additionally, a number of statistical tests were used by the researcher to analyse and test the survey data using SPSS, such as the Cronbach's Alpha coefficient for the reliability test, and the non-parametric Mann-Whitney U test to show the bivariate relationship between major variables (i.e., public vs. private universities). Fraenkel and Wallen (2015, p. 233) defined the Mann-Whitney test and justified its use as "a nonparametric alternative to the *t-test* used when a researcher wishes to analyse ranked data. The researcher intermingles the scores of the two groups and then ranks them as if they were all from just one group". Even though some literature proved the advantage of using non-parametric tests as "being tailored to particular institutional, departmental and individual circumstances" (Cohen, Manion and Morrison 2018, p. 565) and is the most widely used non-parametric "equivalent of the independent t-test", there is still good evidence in education and business literature for researchers to "believe that non-parametric tests have less power than their parametric counterparts" (Field 2009, p. 540). To conduct bivariate comparisons of the major variables identified in the quantitative data, the researcher used the Mann-Whitney test (non-parametric test) because the data from the questionnaire did not meet the conditions required for a parametric analysis, such as the T-test. This test has similar functions as the T-test, but with varied power of presentation. According to Field (2009, p. 344), "the t-test can be biased when the assumption of normality is not met" and most importantly when the data is not randomly obtained. In other words, the

data collected by the survey questionnaire in this study does not have the characteristics of parametric quantitative data, namely 1) normal distribution, 2) homogeneity of variance, 3) interval measure of data between test scores, and finally 4) independence of variables (Field 2009, p. 133). For that reason and based on the nature of the data, the researcher resorted to the Mann-Whitney U test, defined by Cohen, Manion & Morrison (2018, p. 794) as "the non-parametric equivalent of the t-test are the Mann-Whitney U test for two independent samples".

The researcher then downloaded the data into a database spreadsheet and a set of tables for further analysis. Coding, grouping and cleaning the data obtained from the three question groups of the questionnaire (A, B, and C) in relation to RQ1 helped the researcher feed the data into SPSS and get the descriptive analysis results. The sets of figures, graphs and tables produced from the descriptive analysis were utilised by the researcher to integrate the results of the questionnaire into the research, in preparation for the document analysis and interviews.

3.8.2 Qualitative Data Analysis

The researcher then used some of the quantitatively collected data to plan for the qualitative follow-up phase. Creswell (2014, pp. 224–225) stated that "the quantitative results can not only inform the sampling procedure, but it can also point toward the types of qualitative questions to ask participants in the second phase". The researcher's qualitative-based questions (based on RQ2 and RQ3) were general and open-ended, but definitely based on the database formulated through the quantitative phase. The majority of qualitative data-analysis techniques rely on the standard and common data analysis techniques used in qualitative research, most notably *content analysis* and *thematic coding* (Creswell 2014).

Therefore, the major analysis technique the researcher adopted for the document analysis and interview answers was the ***interactive model*** of data collection and analysis, first proposed and explained by Miles and Huberman (1984, 1992, 1994), and then later developed and expanded on by Miles, Huberman and Saldaña (2014). This model of qualitative data analysis involves the collection and analysis of qualitative data results in the form of "an interactive, cyclical process" consisting of three steps: data reduction, data display and conclusion drawing and verification (Miles & Huberman 1994, p. 12). This model has been utilised by the majority of qualitative researchers, as well as those who adopted the mixed-method research design, where "careful data display (e.g., in graphics and diagrams) is an important element of data reduction and selection" (Fraenkel & Wallen 2015, p. 648). It involves the simplifying, summarising and abstracting of data in shorter written formats (*data reduction*), putting the reduced data in an organised and compressed assembly of information (*data display*), and finally making conclusions based

on the reduced and displayed data, with verification being the final step through which the researcher tests the meaning emerging from the data (*drawing conclusions*) (Miles & Huberman 1994). For both document analysis and interviews, the researcher utilised the interactive model by applying the three steps explained above as essential parts of the thematic analysis strategies of coding and categorising.

The reason the researcher followed this model is the fact that it is the most commonly used model by researchers and the most quoted one in the literature. It is comprehensive in the sense that it covers all areas of thematic analysis and suits the theoretical and conceptual frameworks of the study. The researcher found it very convenient to follow this flow of qualitative data analysis once the quantitative data had been obtained and analysed fully through descriptive statistical analysis. Through this model, the collection and thematic analysis of the qualitative data in relation to the faculty members' and academic administrators' ERM perceptions were built up more logically and their questions were more focused and informative. The results the researcher obtained from the follow-up qualitative data will be interpreted in a dedicated discussion section. This interpretation follows the pattern of first reporting on the first-phase quantitative results, and then the second-phase qualitative results. In this pattern of interpretation, the qualitative findings including the document analysis themes will help to explain the quantitative results. In this sense, the researcher avoids merging the two databases (Creswell 2014), as he argues it will create confusion and deprive the follow-up phase of its value and significance. The main objective of this interpretation form is to introduce the document analysis themes and other qualitative data as a support that adds more depth and insight to the quantitative results. Finally, in the discussion section, dedicated to the interpretation of both phases' data, the researcher will explain in what way the qualitative results support and expand on or explain the quantitative results.

For data reduction and display, being the two major components of the interactive model, thematic content analysis techniques were used in both the document analysis and interview stages. As the name implies, content analysis is suitable for this type of qualitative instruments since it "enables the researcher to study the human behaviour in an indirect way", as well as being "the study of the usually, but not necessarily, written contents of a communication" (Fraenkel & Wallen 2015, p. 472). The researcher opted for content analysis also because it entails a data analysis technique that can be easily used in conjunction with other data analysis techniques (Fraenkel & Wallen 2015). The researcher opted for the thematic coding procedure followed in qualitative research by using the NVivo application (Software Version 12). In using this method of data analysis, the researcher started by preparing and organising the selected data for analysis, then moving to reading and reflecting on the data, and finally coding and

categorising the data into thematic "bracketing chunks" based on the language used by the participants (Creswell 2014, pp. 197–198) with the aid of NVivo 12. Saldana (2009, p. 3) defined coding in qualitative inquiry as "a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data". The data considered in this type of analysis may consist of "interview transcripts, participants observation, field notes, journals, documents, literature, artifacts, photographs, video, websites, email correspondence, and so on" (Saldana 2009, p. 3). In this sense, the results of the document analysis and interviews were analysed and displayed with the aim of answering RQ2 and RQ3, which are related to the current ERM policies and practices adopted in the UAE HEIs, and how the academic administrators' and faculty members' responses regarding the implemented ERM practices help propose a workable set of guidelines for more effective ERM framework.

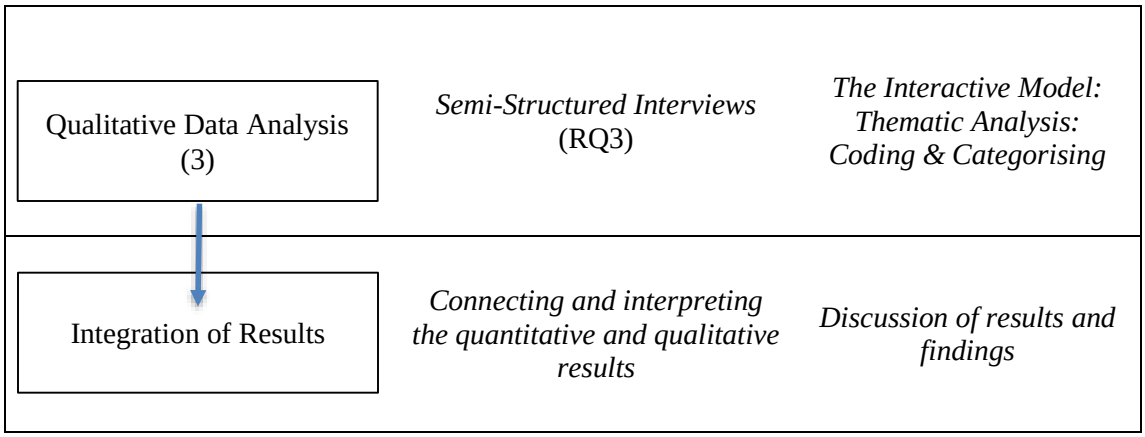
3.8.3 Summary of Data Analysis Techniques

In summary, since the researcher selected the explanatory mixed-method study design in the data analysis of both the quantitative and the qualitative databases that are interpreted separately, for the quantitative data obtained through questionnaires, *descriptive* statistical data analysis was used; for the document analysis, the *content analyses* and *thematic coding* techniques were used; and finally for the interviews, the thematic analysis strategies of *coding and categorising* were employed.

Table 3.7 shows the different data analysis techniques the researcher adopted in the study.

Table 3.7 – Summary of Data Collection and Data Analysis Techniques

Study Stage	Data Collection Method	Data Analysis
Quantitative Data Collection (1)	*Survey – Structured Questionnaire* (RQ1)	*Statistical: Descriptive*
Qualitative Data Collection (1)	*Semi-Structured Interviews* (RQ1)	*The Interactive Model: Thematic Analysis: Coding & Categorising*
Qualitative Data Collection (2)	*Document Analysis* (RQ2)	*The Interactive Model: Content Analysis: Thematic Coding & Categorising*



3.9 Ethical Considerations

"Data collection should be ethical, and it should respect individuals and sites" (Creswell 2012, p. 169). This study was conducted with a view to comply with all ethical requirements mandated as per the BUiD Ethics Form and protocols, and any other associated consent and approval forms (see Appendices 4–7). While approaching the participants of the survey and interviews, the researcher made sure all ethical considerations were complied with by way of seeking to protect the participants and their institutions against any damage or harm, whether physical, emotional, professional, material, financial, reputational or otherwise. Since the researcher relied on convenience sampling for the questionnaire and on purposive sampling for the interviews, the levels of respondent and interviewee bias are taken into account and controlled. The reason is that convenience sampling "has a major disadvantage in that the sample will quite likely be biased" (Fraenkel & Wallen 2015, p. 99). Additionally, a general accepted concept about purposive sampling in interviews is that they represent "a transaction which inevitably has bias, that needs to be recognized and controlled" (Cohen, Manion & Morrison 2018, p. 507). Additionally, the participants' rights of privacy and anonymity were respected in the researcher's attempt to create a balance between the benefits the researcher gets from the study and the risks that the participants and their institutions may be subject to (Howe & Dougherty, 1993).

Following the requirement of confidentiality protection regarding educational research mandated and approved by the Code of Ethics of the American Educational Research Association (AERA 2011), a formal letter (see Appendix 5) was sent to all academic administrators and faculty members clarifying their right to maintain their anonymity throughout the study and beyond its completion (Creswell 2014; Johnson & Christensen 2014). Given the special nature and context of the research question, touching on institutional and management integrity issues that may be related to the academic performance of academic leaders and faculty members, the researcher considered the participants' consent and

reassurance as crucial prerequisites to the execution of the study. The participants' consent was obtained using the consent forms for voluntary participation included in appendices 4–6, after the researcher secured the necessary approvals and signatures of the Doctor of Study (DOS), as well as the BUiD administration. In these forms, the intended study objectives and the constructs, as well as the study design were explained. All data were kept in strict confidentiality, where the researcher refrained from disclosing or sharing them with any other participants or institutions outside the scope of this study. The researcher also locked his electronic files and folders with a secured password to guarantee their cyber safety. In this context, the participants are ***informed participants***, whose *informed consent* through "agreeing to participate in a study after being informed of its purpose, procedures, risks, benefits, alternative procedures, and limits of confidentiality" (Johnson & Christensen 2014, p. 133) was indispensable to the completion of the research. Any bias that may arise as a result of the participants' long experience in the field of risk management was eliminated.

3.10 The Role of the Researcher

The researcher placed himself in the quantitative phase of this research, and during much of the qualitative one, as a detached participant learner and surveyor, with such a role being disclosed to the participants to let them know what the researcher was exactly looking for as someone seeking to learn from them (Saunders, Lewis & Thornhill 2019). However, since this study adopts a mixed-method design, the role of the researcher would slightly and conveniently vary in each phase to adapt to the context and requirements of the data collection tools of each phase. Fraenkel and Wallen (2015, p. 15) explained the two different roles a researcher may adopt based on the study purpose and design:

> When it comes to the purpose of research, quantitative researchers seek to establish relationships between variables and look for and sometimes explain the causes of such relationships. Qualitative researchers, on the other hand, are more concerned with understanding situations and events from the viewpoint of the participants.

In the context of this study, and while collecting the quantitative data through the survey instrument, the researcher played the role of a detached objective observer in the sense that he based the data collection method and analysis on the belief that facts and feelings can and must be kept separate. Whereas when conducting the qualitative study, the researcher relied heavily on the assumptions, views and most importantly the perceptions of the participants in interpreting the results of the ERM document analysis and interview questions. This came to be one of the reasons why the researcher resorted to the follow-up qualitative study. In other words, the researcher simply observed the participants as they endeavoured to identify major themes related to the risk management policies and manuals adopted in certain HEIs and provide rationales for their implementation. In this sense, the researcher assumes "that the world is made

up of multiple realities, socially constructed by different individual views of the same situation. Accordingly, the participants often tend to be directly involved in the research process itself' (Fraenkel & Wallen 2015, p. 15). As stated by Creswell (2014, p. 207), in qualitative research "the investigator's contribution to the research setting can be useful and positive rather than detrimental".

The researcher in this study, and while conducting the interviews, tended to add his contribution to the findings while at the same time establishing his claims on already existing beliefs and conclusions from the previous literature. There were a few instances where the participants of the interviews were discreet in providing answers to several questions (e.g., Interview Q9 and Q10 on the relationship between ERM implementation, organisational change and academic effectiveness). In other examples, the participants were hesitant to provide full details and their answers were too short to be relied on. In these cases, the researcher relied on his previous knowledge from the ERM literature and motivated the participants to be more proactive when providing their answers. Consequently, as part of observing the ethical considerations of this study, the researcher challenged himself every time he approached a participant in order to eliminate any personal bias through information reviewing and data pre-testing with academics and colleagues in the field.

3.11 Research Activity Plan

The researcher planned to conduct the study within fourteen (n= 14) months after the Proposal Defense and Approval, using the resources and the proposed action timeline shown in detail in Table 3.8.

Table 3.8 – Research Activity Plan

No.	***Research Activity***	***Target Date (Month /Year)***
1	• Plan for the research and develop data collection instruments. • Modify chapters 1, 2 and 3 in the light of the DOS and committee's feedback and comments.	*Aug–Sept 2020*
2	• Finalise the questionnaire (survey instrument) in the light of the research questions of the study and based on previous proven research in the field. • Finalise drafting of chapters 1, 2 and 3.	*Aug–Sept 2020*
3	• Pilot the survey instrument for validity check and seek academic and professional consultation and feedback on the survey questions, as well as obtaining required consent and approval for the survey from the selected universities through BUiD ethics forms. • Revise Chapter 1 based on feedback from DOS.	*Sept 2020*
4	• While still working on the first three chapters revisions with DOS, revise the questionnaire survey based on feedback received from different respondents from the selected universities. • Meet with major respondents and share ideas and thoughts about the data collection tools.	*Oct 2020*

	• Send a draft Chapter 2 to DOS for feedback and comments.	
5	• Distribute revised and enhanced questionnaires to the selected major respondents for further piloting and enhancements. • Make video calls with a few major respondents to seek their feedback and thoughts about the survey and document analysis data collection tools. • Finalise draft Chapter 2 and send it to DOS. • Prepare draft Chapter 3 and share it with DOS for review and feedback.	*Nov 2020*
6	• Collect questionnaire results and start on the data analysis process, using SPSS, Microsoft Office applications and any other instrument or tool suggested by DOS. • Further work on chapters 1–3, as may be required by DOS and updates from the survey instrument piloting and respondents' feedback. • Start drafting chapters 4 and 5.	*Dec 2020*
7	• Review quantitative data, consolidate findings and results, adapt them to the study and draft findings based on them. • Continue drafting chapters 4 and 5. • Make preparations for the document analysis and interviews' phase.	*Jan-Feb 2021*
8	• Start on the final phase of the study by conducting document analysis and preparing interview schedule based on data collected through the questionnaires and document analysis.	*Mar 2021*
9	• Conduct interviews with 5 selected faculty members and administrators. • Keep working on chapters 4 and 5 based on the findings and results, and feedback from DOS.	*Apr 2021*
10	• Consolidate findings and results and integrate analyses of both quantitative and qualitative data into chapters 4 and 5. • Finalize and submit draft chapter 4 to DOS for feedback and comments. • Once feedback on chapter 4 is received, submit draft chapter 5 to DOS based on feedback and comments on chapter 4.	*May 2021*
11	• Finalise review and editing of chapters 4 and 5 with the DOS and prepare a final draft of the complete thesis based on the inclusive comments and feedback from DOS.	*Jun-Jul 2021*
12	• Seek a professional proofreading expert's support to review and edit the whole thesis document;	*Aug-Sept 2021*
13	• Once proofreading is completed, make arrangements for submission of final draft of the thesis for final Viva defence and/or approval.	*Oct-2021*

3.12 Summary of Study Methodology

This mixed-methods quantitative–qualitative study was conducted by the researcher utilising an explanatory mixed-method study design. Once the literature review, Theoretical Framework and conceptual analysis were identified and set up, this design learned from the findings of the literature and existing theories to comprise of two major quantitative and qualitative phases, using the mixed sequential method for data collection and analysis.

On the one hand, the ***quantitative phase*** of the study was structured to produce statistical descriptive data results, using a cross-sectional survey instrument to examine—at a specific point in time—the

perceptions of the respondents towards ERM adoption, implementation, and integration in UAE HEIs. On the other hand, the ***qualitative phase*** of the study adopted document analysis and interview instruments to effect qualitative data thematic and coding results. A questionnaire was designed and distributed to the participants of the study to answer the major perceptions based on RQ1, while the document analysis and semi-structured interview protocol were developed to complement and validate the findings of the quantitative results. The subjects of this study comprised of two groups: those faculty members with sufficient knowledge of risk management in general and ERM in particular, and the academic administrators at HEIs involved in the risk management or ERM programmes at their institutions.

This chapter accounted for the analysis methods adopted by the researcher in order to integrate and incorporate the results of both the quantitative and qualitative phases in order to answer the research questions of the study. Ethical considerations and the research activity plan were also presented by the researcher, paving the way for the findings and data analysis in Chapter Four where more specifics will begin to show in relation to the topic, purpose and questions of the study.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter engages in a detailed and comprehensive analysis of the data collected through the two major phases of the study: the quantitative and the qualitative. Since the researcher adopted a mixed-method approach to the data collection and analysis, the data obtained from the two phases is presented and analysed in this chapter with the aim of providing evidence to answer the three research questions that represent reflections of the main research aim and objectives.

In this perspective, the researcher adopts the approach of presenting and analysing the data in this chapter based on the study's research questions. aim and objectives. The data are presented and analysed based on the ultimate goal of answering the research questions and achieving their major objectives. Each question and corresponding objective are modified into section headings, and the relevant data drawn from both the quantitative and qualitative datasets determine the degree to which the evidence answers the research questions or achieve their objectives. Through this approach, the researcher aspires to build a systematic case to show how the research achieves its aim and objectives.

The chapter is structured into three main sections (4.3.1, 4.3.2, and 4.3.3) in a way whereby each of these sections corresponds and responds to each of the research questions and objectives, as identified in Table 1.1.

The first section, the quantitative component of the study, covers the three major sections of the structured questionnaire, which will be first presented, analysed, and summarised in order to answer RQ1 (and partially RQ2 and RQ3):

RQ1: *What are the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs?*

The analysis method adopted for the discussion of data obtained through this phase will be descriptive statistical. Descriptive data analysis helps the researcher "to describe, summarize, or make sense of a particular set of data" (Johnson & Christensen 2014, p. 518). The answers to this question are grouped in three major sections, as shown in Appendix 2, corresponding to the three major sections of the survey questionnaire instrument targeting faculty members and administrators about their perceptions towards the effectiveness of ERM adoption, implementation, and integration in their HEIs.

The second and third sections of this chapter focus on analysing the data to answer RQ2 and RQ3 respectively. In these sections, the researcher presents an analysis and summary of the qualitative component of the study obtained through the semi-structured component of the questionnaire, document analysis and semi-structured interviews. Therefore, the findings of this phase aim at answering RQ2 and RQ3 (and partially so for RQ1):

RQ2: *What are the current ERM policies and practices in the UAE HEIs? In other words, what are the main aspects of the currently implemented ERM standards, guidelines and policies that UAE HEIs have, as perceived and described by administrators with risk management responsibility and faculty members with risk management knowledge?*

RQ3: *What are academic administrators' and faculty members' recommendations for a set of workable guidelines to help build a more effective ERM framework?*

The analysis model adopted for the discussion of the data obtained from this phase is the *interactive data analysis model*, that is, a qualitatively based thematic reduction, display, coding and categorising technique defined in the Methodology chapter. The results of both the document analysis of some of the ERM policies and frameworks adopted in the UAE and some UAE HEIs, as well as the data elicited from the interviews, will be presented through coded and categorised themes, and then analysed and discussed accordingly.

In summary, this chapter has been structured by the researcher to focus on analysing the data to provide evidence to achieve the main aim and objectives of the study. By doing so, it aims to provide answers to each of the research questions set out in Chapter One of the study (see Table 1.1). A summary of the research questions and objectives in relation to the data analysis techniques used by the researcher has been presented in Table 1.1 of this study

4.2 Results of the Demographic Data Analysis

The researcher relied on formal and informal communication channels in order to collect the responses of the survey, while relying on the convenience method of sampling. From the tables and graphs below, it is evident that the participants consist of very diverse demographic components, which reflects the target population of faculty members and administrators. Finally, it can be stated that the demographic information obtained from the quantitative data reflects the characteristics of academics implementing and performing risk management and QA in the case universities.

In this context, and for the above-mentioned reasons, the original targeted number of participants planned by the researcher was meant to be one hundred and forty (*n*= 140), distributed equally between faculty members and administrators from both public and private universities. However, by focusing on the data and evidence that would achieve the study objectives, when the researcher obtained 100 responses, twelve (*n*= 12) of the responses were incomplete and there were some gaps in the distribution between faculty members and administrators. Therefore, the researcher had to distribute the survey among more respondents in the selected universities, where some universities scored a higher rate of responses, while others scored a lower rate than the rate requested by the researcher. As is evident from the tables and figures in this section, the final results of the survey data collection and analysis meant that one hundred and one (n= 101) responses were fully completed and obtained out of the total number of participants conveniently approached by the researcher and were deemed valid for inclusion in this study. Those additional responses were recorded, and the results were used by the researcher in the analysis for more generalisability and better conclusions.

The following tables and figures show the demographic information of the selected sample, broken down by information related to the role of the participants, their academic qualification, professional experience, institute type and finally the type of study programme offered at their institutions.

Table 4.1 – Demographic Distribution of Participants by Institution Type and Number

Statement	No. of Institutions	Count	Percentage
Public	2	47	47.0%
Private	4	53	53.0%
Missing	0	1	
Total	**6**	**101**	**100.0%**

Table 4.2 – Demographic Distribution of Participants by Role

Statement	Count	Percentage
Administrator	45	44.55%
Faculty Member	33	32.67%
Both	23	22.78%
Total	**101**	**100.0%**

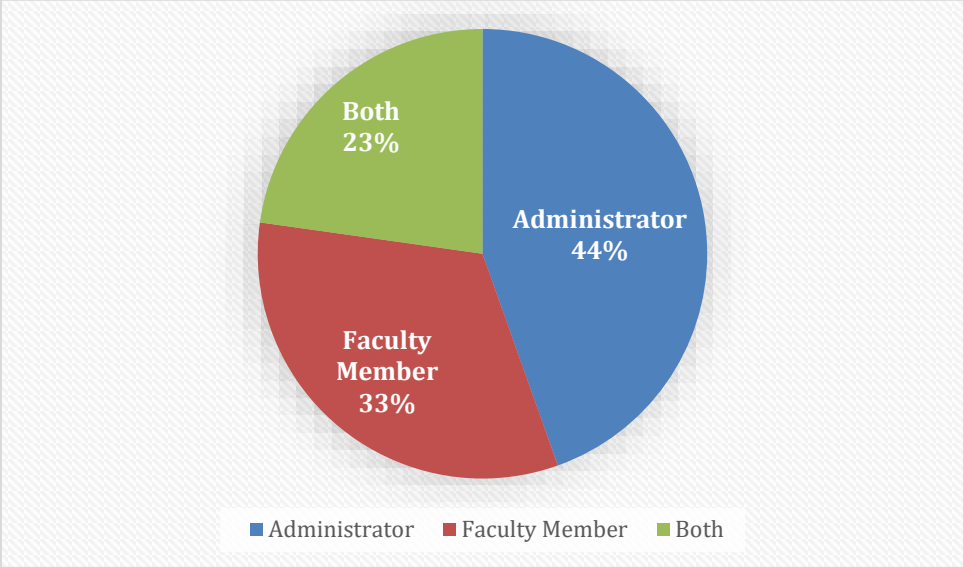


Figure 4.1 – Demographic Distribution of Participants by Role

Table 4.3 – Demographic Distribution of Participants by Qualification

Statement	Count	Percentage
Bachelor's Degree	14	14.0%*
Master's Degree	38	38.0%
PhD	48	48.0%
Missing	1	
Total	**101**	**100.0%**

**Some of the percentage figures in this and following Tables have been rounded for the sake of easy reading and analysis, and to avoid inclusion of unnecessary fractions which will make no difference to the results of the data.*

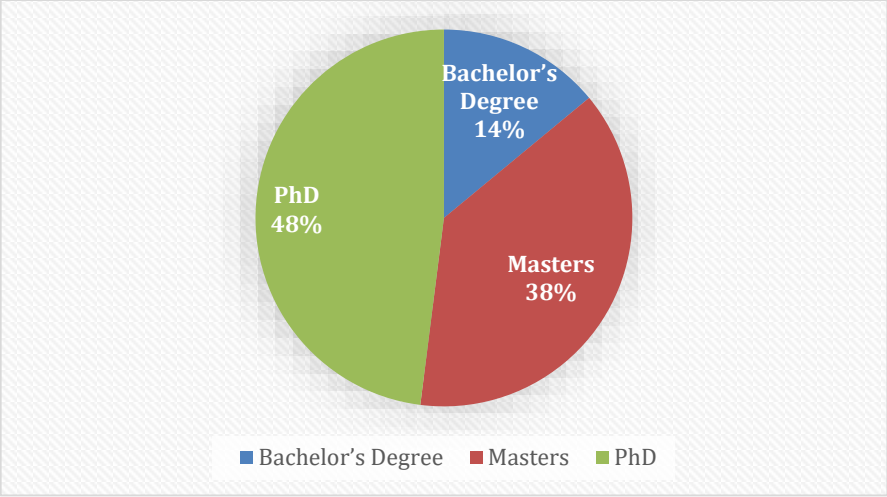


Figure 4.2 – Demographic Distribution of Participants by Qualification

Table 4.4 – Demographic Distribution of Participants by Years of Professional Experience

Statement	Count	Percentage
1 – 5	25	25.0%
6 – 10	50	50.0%
11 – 15	3	3.0%
16 – 20	11	11.0%
More than 20	11	11.0%
Missing	1	
Total	**101**	**100.0%**

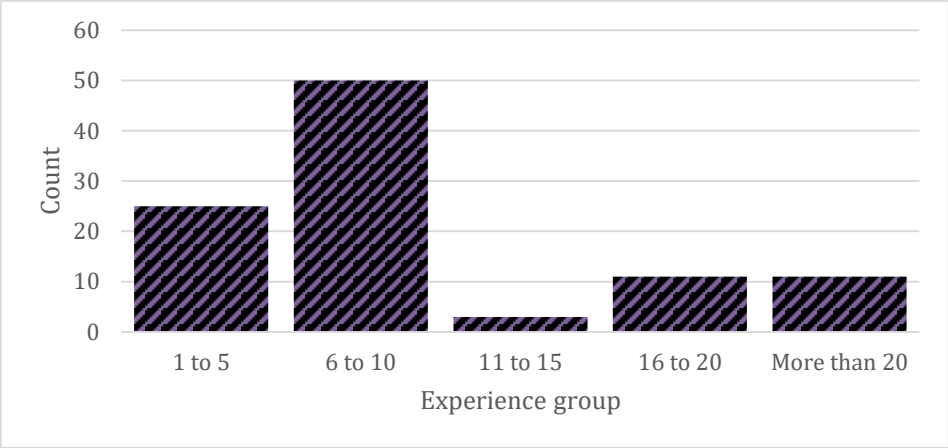


Figure 4.3 – Demographic Distribution of Participants by Professional Experience

Table 4.5 – Demographic Distribution of Participants by Institution Type

Statement	Count	Percentage
Public	47	47.0%
Private	53	53.0%
Missing	1	
Total	**101**	**100.0%**

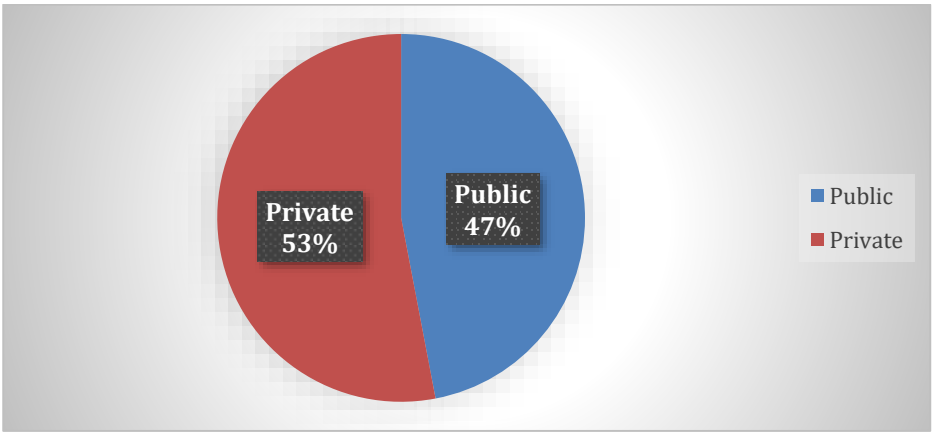


Figure 4.4 – Demographic Distribution of Participants by Institution Type

Table 4.6 – Demographic Distribution of Participants by Study Programme Type

Statement	Count	Percentage
Undergraduate	13	12.9%
Post-graduate	57	56.4%
All of the above	31	30.7%
Total	**101**	**100.0%**

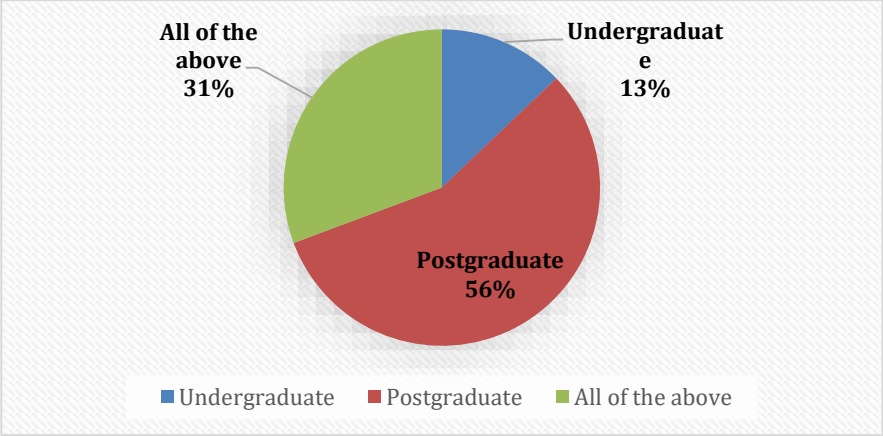


Figure 4.5 – Demographic Distribution of Participants by Study Programme Type

The above demographics show a near identical distribution of the major demographic variables that mainly affect the results of the study with regards to RQ1, corresponding to its major aim. These major demographic variables include the distribution of findings by *participants' role*, *experience and qualification*, and *institute type* as the three most important variables likely to play a major role in shaping the participants' awareness as well as identification of their perceptions of effective ERM implementation in UAE universities. These variables would even affect the mechanism of implementing and performing risk management and QA in their respective HEIs. While the administrators counted 45 (representing 44.6% of the total number of participants), the faculty members counted 33 (representing 32.7% of the total number of participants), and 23 identified themselves as both faculty members and administrators (representing 22.8% of the total number of participants). This indicates that the participants who completed the survey were similar in their awareness and perceptions with regards to the role they play at their respective institutions, as was originally intended by the researcher. Additionally, since the targeted population is all the universities in the UAE, as explained in the Methodology chapter, the demographics would also focus on the university type, in addition to the experience and qualifications of the participants, and the programmes of study being provided at the institution, explained more specifically as follows.

The majority of the 101 survey participants hold either a PhD (48%) or master's degree (38%), while a few (14%) hold a bachelor's degree. The respondents have worked a mean average of 11 years at their institution, with 50% (*n*= 50) of the respondents having worked at their institution for an average of 6–10 years, and 11% (*n*= 11) of respondents having worked at their institution for more than 20 years.

There was no uniformity to the factor of risk management responsibilities assumed by the respondents depending on their qualification or institute type. However, the survey responses showed that all the respondents assume an ERM or risk management responsibility of a different designation. The respondents assume a variety of different responsibilities including designing and implementing risk policy, performing risk assessment, and performing risk evaluation, with the "Risk reporting" designation being the most selected responsibility chosen by the respondents 52 times, and "Performing risk evaluation" coming second, as selected by the respondents 49 times. On the other hand, "Designing and implementing", being one of the major ERM responsibilities defined in the questionnaire, came as the last option for all respondents in all selected universities in the UAE, as Table 4.7 shows. This would indicate the fact that the major basic task of designing and implementing risk management processes falls in the hands of a very limited number of administrators at the UAE universities, with very limited and clear role and responsibility designations, such as those of the risk manager or internal auditor.

Table 4.7 – Roles and Responsibilities Against Risk Management and QA Functions

Statement	Count	Order (Descending)
Designing and implementing	12	1. Risk reporting
Performing risk assessment	33	2. Performing risk evaluation
Performing risk evaluation	**49**	3. Conducting risk policy
Risk reporting	**52**	4. Building risk awareness
Conducting risk policy	45	5. Performing risk assessment
Building risk awareness	35	6. Designing and implementing

The list of roles and responsibilities in Table 4.7 indicate the level of engagement of each of the respondents in the risk management process, starting from the basic task of designing and implementing a risk management framework and policy, to the sophisticated and advanced task of building risk awareness among stakeholders.

Additionally, through the demographics the researcher found that ERM programme and risk management functions in general are located across many areas and functions in the institution. This is relevant to the components of the Conceptual Framework of the study, which introduces the concept of ERM as a process of adoption, implementation and integration, and how decision-making plays a major factor in

this process and its effectiveness. In this sense, it is very important to define the information of who or which department owns the ERM decision-making process in the selected institutions. The findings of the survey show that a variety of ERM programmes are located in many areas of the institutions and are overseen by different designations at the ladder of decision-making, with the Risk Manager being the mostly cited owner of the ERM function by respondents (with a rate of 78.7% in the public institutions and 66% in the private institutions responses). The Internal Auditor and Risk Analysts came second at 59% and 55%, respectively, in public institutions, and 56% and 39%, respectively, in private institutions; while the Head of Effectiveness came fourth as the controller of the risk management process in all selected universities, scoring 57.4% in public institutions and 22.6% in private institutions. Based on the role of the respondents, the majority of the administrators (*n*= 75.6%) agreed that the duties of ERM mainly fall in the hands of the Risk Manager.

Table 4.8 – Owner of the Decision-Making of the Risk Management Process

Statement	Count	Order (descending)
Board of Trustees	11	1. Risk Manager
President/Chancellor	15	2. Internal Auditor
Vice President	11	3. Risk Analyst
Internal Auditor	**58**	4. Head of Effectiveness
Risk Manager	**73**	5. President/Chancellor
Risk Analyst	47	6. Board of Trustees
Head of Effectiveness	39	7. Vice President
Legal Advisor	0	8. Insurance Manager
Insurance Manager	1	9. Other
Other	4	10. Legal Advisor

Through the demographic data, it is found that the selected UAE HEIs cascade the responsibilities of ERM decision-making into lower managerial levels. This would emphasise some of the interview findings that the implementation and integration of ERM at these institutions are more of an option than a mandate. It would therefore be recommended to follow the classical norm of risk management decision-making by vesting it in the top managerial level at the institution, be this the president, chancellor, vice president, vice chancellor or the board of trustees.

Regarding the actual corresponding term used by the institution for risk management and QA, “Risk Management” was the most commonly used term selected by the survey respondents (*n*= 73 times) and then “Enterprise Risk Management” (*n*= 49 times), which confirms the fact of that a clear risk management and ERM framework is indeed already present in the selected UAE HEIs, as Table 4.9 shows.

Table 4.9 – Actual Corresponding Term Used by the Institution for Risk Management and QA

Statement	Count	Order (descending)
RM	**73**	1. Risk Management (RM)
ERM	**49**	2. Enterprise Risk Management (ERM)
SRM	12	3. Quality Assurance (QA)
QA	46	4. Strategic Risk Management (SRM)
All of the above	2	5. All of the above
Other; no idea	2	6. Other; no idea

Finally, the demographics show that the selected institutions in the study have had their ERM programme in place for a mean average of 10 years, as indicated by the number of years selected (*n*= 37) by the respondents, representing 45.12% of all respondents who answered this question. The ERM programme in place for the longest duration was started in 2002 by one of the selected public institutions, while 3 private institutions had started their ERM programme within the last 6 years, in the 2015-2021 period. Almost 18% of the institutions in the study have had their ERM programme in place for 8 years or less, and 6.10% have had their ERM programme in place for 4 years or less. This supports the researcher's conclusions in both document analysis and interview sections that the selected UAE universities demonstrate a good and clear level of maturity with regards to the adoption of a clear risk management framework and programme.

4.3 Results of the Study

4.3.1 Analysis of the Academic Administrators' and Faculty Members' Perceptions of the Effectiveness of ERM Implementation in UAE HEIs

The data obtained from the questionnaire will be used to facilitate understanding of the academic administrators' and faculty members' perceptions of the effective ERM implementation in UAE HEIs. This is related to answering RQ1: *What are the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs?* The survey instrument used to collect the quantitative data is consistent with the three major conceptual components identified in the Conceptual Framework of the study: ERM adoption, ERM implementation and ERM integration. As a result, the findings of the quantitative survey will be grouped into three major categories corresponding to the three major question groups (Group A, Group B and Group C) directed to the major respondents (faculty members and academic administrators) of the study. This question grouping was intended by the researcher to correspond to the major conceptual components of the study – ERM adoption, implementation and integration – where Group A questions sought the participants' perceptions of the nature of ERM adoption in their academic institution; Group B explored the participants' perceptions

of and involvement in effectiveness of ERM implementation in their academic institution; and Group C sought the participants' perceptions and feedback on the already-implemented ERM policies and guidelines adopted in their institutions in the ERM implementation process. As stated earlier, in addition to the first group of demographic questions, items 18 to 34 (Appendix 2) were survey-based and perception-centred statements for the purpose of defining the risk maturity level of the selected HEIs. In other words, this group of questions was designed in a way so that the perceptions of the respondents would help decide on the level and degree of risk maturity rating in the selected institutions. The answers of the respondents to survey items 18 to 34 were collected based on a scale of four different maturity levels of ERM perceptions towards one aspect of the ERM process and implementation effectiveness. These answers ranged from A (*initial or pre-ERM*) to D (*very mature or developed*).

4.3.1.1 The Cronbach's Alpha Reliability Test

As detailed in the Methodology chapter, the researcher conducted a reliability test for the demographic variables and questionnaire items included in the survey by using the Cronbach's Alpha coefficient test. As Tables 3.6 and 4.10 show, the test was conducted on 32 items of the survey study to examine if they share almost identical scales of covariance elements and if they measure the same underlying concepts and based on that the results came to indicate highly reliable questionnaire items.

Table 4.10 – Item-Total Statistics of the Questionnaire Reliability Test

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Role	105.163	108.020	.112	.826
Qualification	104.593	109.138	.066	.826
Experience	104.616	107.863	.037	.835
Institute Type	105.453	113.710	-.318	.832
Programme	104.767	106.886	.242	.821
Years of ERM application	104.988	110.576	-.027	.827
Q8	102.407	106.597	.298	.820
Q12	101.826	105.016	.369	.818
Q13	102.291	101.126	.391	.816
Q14	102.198	103.290	.386	.817
Q15	102.163	97.879	.651	.806
Q16	102.221	99.233	.543	.810
Q17	105.244	111.340	-.088	.839
Q18	104.384	101.816	.408	.816
Q19	104.198	102.231	.351	.818
Q20	103.919	103.040	.480	.814
Q21	104.326	104.457	.256	.822
Q22	104.314	100.900	.554	.811

Q23	104.453	103.168	.323	.819
Q24	104.244	103.434	.386	.817
Q25	103.302	102.260	.469	.814
Q26	103.442	101.944	.468	.814
Q27	103.558	101.238	.548	.811
Q28	103.651	99.877	.640	.808
Q29	102.919	106.782	.250	.821
Q30	102.744	108.004	.139	.824
Q31	103.651	101.242	.497	.813
Q32	103.616	101.698	.465	.814
Q33	103.140	102.945	.429	.815
Q34	103.360	103.010	.434	.815
Q35	101.674	106.152	.288	.820
Q38	103.093	104.038	.477	.815

Table 4.10 shows the values of the Cronbach's Alpha coefficient in relation to the survey questionnaire items. The coefficient results of both the demographic variable items as well as the Likert scale and maturity-level testing questions indicate that the values of Cronbach's Alpha range between 0.806 (as the lowest value) and 0.835 (as the highest value). The table also shows that if any of the items of the questionnaire scales is deleted or discarded the Cronbach Alpha measure will be impacted and will go below 0.5 or 0.4. Therefore, this result indicates that all the items of the questionnaire are > 0.8, which means they are all *highly reliable and consistent*.

4.3.2 Perceptions on the Effectiveness of ERM Adoption

In this study, perceptions are the major focus of the researcher in the attempt to obtain findings and answers. Perceptions in this study refer mainly to the amount of knowledge and level of awareness of the participants about the topic of ERM in higher education. These perceptions of the study participants were obtained through either survey questions or interview questions, designed purposefully in a way to avail from the respondents' knowledge about the subject, as well as to define the level of their awareness about its elements and components.

The participants of the survey were asked about their awareness of or reasons for adopting ERM, based on the reasons and elements generally cited in the ERM literature. The first groups of survey items (**A-1: Q8 to Q17** – see Appendix 2), in addition to **Q7**, were all focused on generating evidence to understand the respondents' awareness of the adoption of a clear risk management policy or ERM framework by their selected universities.

The answers of respondents to these questions will be used to understand the level of involvement and engagement of the selected institutions regarding their adoption of effective ERM as their chosen QA programme. In terms of ERM adoption, the answers to Q7 are analysed to provide evidence of the level of adoption of the respondents at their respective institutions, as shown in Table 4.7. Sixty percent of all administrator respondents, and 42.4% of all faculty members (and 47.8% of those who identified themselves as both administrators and faculty members) in the selected universities chose "Risk reporting" as one of their major roles in their institution. "Performing risk evaluation" came second in the sum of all responses, where 75.6% of all administrators and 56% of all faculty members opted for this task as one of their major duties in their selected institutions. This shows a very good percentage, which informs on the level of risk management adoption in the selected universities. With "Risk reporting" and "Performing risk evaluation" being at the top of the participants' selection, the researcher concludes that building and designing a risk management policy or framework are already existing functions mandated by senior management decision-making, where only routine risk management actions are left for the lower-level staff at the selected institutions.

As stated earlier, in terms of ERM adoption, the data in Table 4.7 provide some evidence that indicates the level of understanding and awareness of the respondents of ERM adoption at their respective institutions. While the number of choices vary, they all show that at least some level of ERM adoption is evident in all the selected institutions.

Additionally, in terms of ERM adoption, from the answers to Q9 it is found that the actual corresponding term for risk management and QA functions used by the selected institutions has been determined. In order to give the survey participants more freedom in determining the corresponding term, and because more than one designation can be assigned to one QA function, the researcher gave the respondents the option to select more than one answer for Q9. The majority of all respondents (74.5% of the respondents in the selected public universities and 69.8% of the respondents in the selected private universities) opted for the term "Risk Management". At the same time, 63.8% of the respondents in the selected public universities and 35.8% of the respondents in the selected private universities also went for "Enterprise Risk Management/ERM" as the term used to denote the QA function at their institutions, in addition to "Risk Management" (see Table 4.12). This gives a good indication that ERM identifies itself in a clear place across the corporate functions of UAE public universities rather than private universities. However, in all cases, the statistical results and themes obtained from the document analysis and interviews indicate that UAE HEIs seem to still be uncomfortable with using the term "ERM" and are more comfortable

using the term “Risk Management”. The following tables give an indication of the nature of the QA function being identified in terms of adoption and implementation in the selected universities.

Table 4.11 – Actual Corresponding Term Used for Risk Management and QA Programme Implementation

Statement	Count	Order (descending)
RM	73	1. Risk Management (RM)
ERM	49	2. Enterprise Risk Management (ERM)
SRM	12	3. Quality Assurance (QA)
QA	46	4. Strategic Risk Management (SRM)
All of the above	2	5. All of the above
Other; no idea	2	6. Other; no idea

Table 4.12 – Actual Corresponding Term used for Risk Management and QA Programme Implementation by Institution Type

Statement	Public (47)		Private (53)		Missing
	#	%	#	%	
RM	35	74.5%	37	69.8%	0
ERM	30	63.8%	19	35.8%	0
SRM	4	8.5%	8	15.1%	0
QA	23	48.9%	22	41.5%	1
All of the above	1	2.1%	1	1.9%	0
Other; no idea	0	0.0%	2	3.8%	1

Table 4.13 – Actual Corresponding Term Used for Risk Management and QA Programme Implementation by Years of Application

Statement	Initial (15)		Moderate (70)		Mature (13)		Missing (3)
	#	%	#	%	#	%	
RM	8	53.33%	52	74.29%	13	100.00%	0
ERM	4	26.67%	35	50.00%	10	76.92%	0
SRM	2	13.33%	8	11.43%	2	15.38%	0
QA	9	60.00%	29	41.43%	7	53.85%	1
All of the above	0	0.00%	2	2.86%	0	0.00%	0
Other; no idea	0	0.00%	0	0.00%	0	0.00%	2

Table 4.14 – Actual Corresponding Term Used for Risk Management and QA Programme Implementation by Role of Participants

Statement	Administrator (45)		Faculty Member (33)		Both (23)		Missing (0)
	#	%	#	%	#	%	
RM	35	77.8%	18	54.5%	20	87.0%	0
ERM	23	51.1%	11	33.3%	15	65.2%	0
SRM	7	15.6%	4	12.1%	1	4.3%	0
QA	17	37.8%	13	39.4%	16	69.6%	0
All of the above	0	0.0%	1	3.0%	1	4.3%	0

Other; no idea	1	2.2%	1	3.0%	0	0.0%	0

In terms of ERM adoption, the statistical figures in the above Tables 4.11 to 4.13 exhibit a good maturity level in the selected UAE HEIs, where good maturity levels suggest that the respective institutions sustain a clear definition of the institutional objectives and perform proper planning and resourcing, as well as effective monitoring and control of their risk management processes. The majority of the respondents in both public and private universities identified "ERM" as the term used in their institution to refer to the clearest QA function adopted across their campuses, whereby 51% of all the administrators, 33.3% of all the faculty members and 65.2% of all those who identified themselves as both administrators and faculty members selected ERM as the QA practice adopted in their respective institutions.

The results of descriptive statistical analysis of Table 4.12 show the difference in awareness levels between participants from public institutions and those from private institutions: "The actual Corresponding Term used for Risk Management and QA Programme Implementation by Institution Type". However, since the researcher "cannot satisfy the assumptions underlying the use of parametric techniques" (Fraenkel and Wallen 2015, p. 229), the non-parametric Mann-Whitney test was used to test the significance of the difference between the two variables of public and private universities with regards to ERM and QA awareness and perceptions.

Table 4.15 – Man-Whitney Test showing Significance of Difference between Public and Private Universities (1)

Group	***Mean***	***Standard Deviation***	***N***	***Test***	***Test Statistics***	***P-value***
University type	Pub. = 4.80 Prvt. = 4.70	Pub. = 0.705 Prvt. = 0.919	Pub. = 47 Prvt. = 53	Mann-Whitney U	Z = - 0.025	Sig. = 0.958

Interpreting the results of Table 4.15, the researcher found that Mann-Whitney U is equal (=) - 0.025 and p-value is equal (=) 0.958 > α (α = 0.05). In this sense, the null hypothesis is acceptable where it is concluded that there is no significant difference between public and private institutions with regards to the level of their awareness of risk management and QA. This means that the faculty members and academic administrators of both types of institutions share the same level of awareness for risk management and QA. However, the small differences in the mean, average and standard deviation happened because of sample error and the insufficient total number of responses. Therefore, it can be concluded there is no significant difference between public and private institutions with regards to the level of awareness of the concept ascribed to risk management and QA functions.

In terms of ERM adoption, the survey items Q12 to Q17 use Likert scale rates of "Awareness" to specifically measure the perceptions of the participants towards effective ERM adoption in their academic institutions. The responses to these items indicate a clear level of awareness among the respondents towards all elements of risk management or ERM adoption at their respective institutions. These elements include the existence of a clearly defined policy at the institution, as well as the appointment of a risk officer or committee to implement and evaluate risks, and finally the performance of periodic reviews of risk processes and the existence of a defined list of risks that can be resorted to by the management of each institution.

The majority of the responses (47.2%) were in favour of the "Very Aware" choice, which implicates an acceptable level of awareness evident among the majority of the survey respondents, as Table 4.15 and Figure 4.6 show:

Table 4.16 – Overall Awareness Measure of ERM Adoption Elements

Q	Extremely Aware		Very Aware		Somewhat Aware		Not so Aware		Not at All Aware		No idea	
	#	%	#	%	#	%	#	%	#	%	#	%
Q12	27	26.7%	60	59.4%	10	9.9%	2	2.0%	1	1.0%	1	1.0%
Q13	18	18.0%	55	55.0%	0	0.0%	25	25.0%	2	2.0%	0	0.0%
Q14	19	18.8%	46	45.5%	26	25.7%	7	6.9%	2	2.0%	1	1.0%
Q15	25	25.0%	38	38.0%	30	30.0%	6	6.0%	1	1.0%	0	0.0%
Q16	24	24.0%	38	38.0%	24	24.0%	14	14.0%	0	0.0%	0	0.0%
Overall	**113**	**22.5%**	**237**	**47.2%**	**90**	**17.9%**	**54**	**10.8%**	**6**	**1.2%**	**2**	**0.4%**

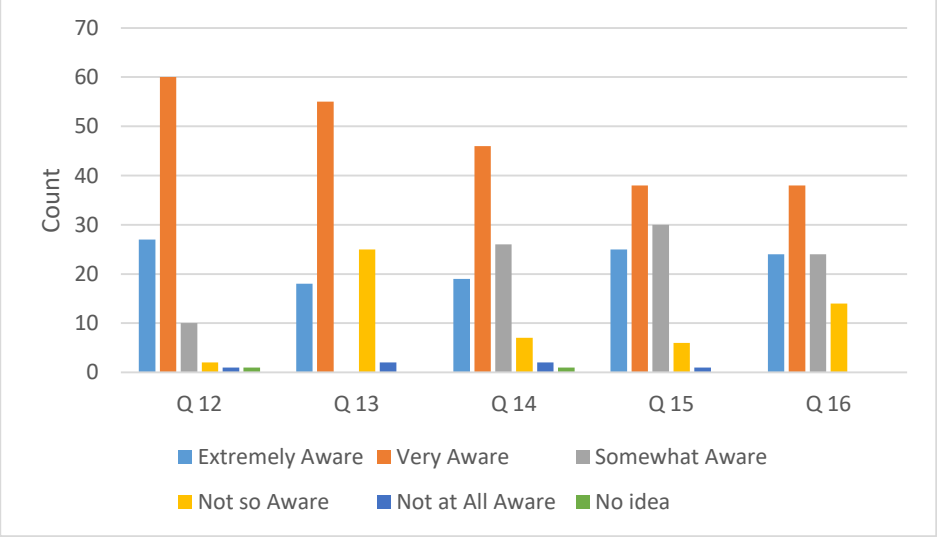


Figure 4.6 – Overall Awareness Measure of ERM Adoption Elements

This analysis now focuses on the main reasons that justified and influenced the formation and adoption of a risk management framework policy in the way it has been implemented at the selected institutions. These drivers, reasons and factors were identified by answering item Q36, where the respondents were asked about their reasons for adopting ERM. The researcher based these drivers on the reasons generally cited in the ERM literature, as well as previous research conducted in the field. The respondents were given the option to select more than one response, as evident in the results presented in Table 4.16.

Table 4.17 – Reasons for ERM Programme and Policy Adoption

Reasons	Count	Order (descending)
Official regulatory law	89	1. Official regulatory law
Senior management decision	55	2. Senior management decision
Response to a failure	24	3. Part of the process of risk assessment
Strategic planning	28	4. Strategic planning
Part of the process of risk assessment	38	5. Senior decision-making
Senior decision-making	25	6. Adapting to economic environment
Adapting to economic environment	25	7. Response to a failure
Hoping for a more effective academic process, and therefore success	21	8. Hoping for a more effective academic process, and therefore success
Others: CAA requirements	1	9. CAA requirements

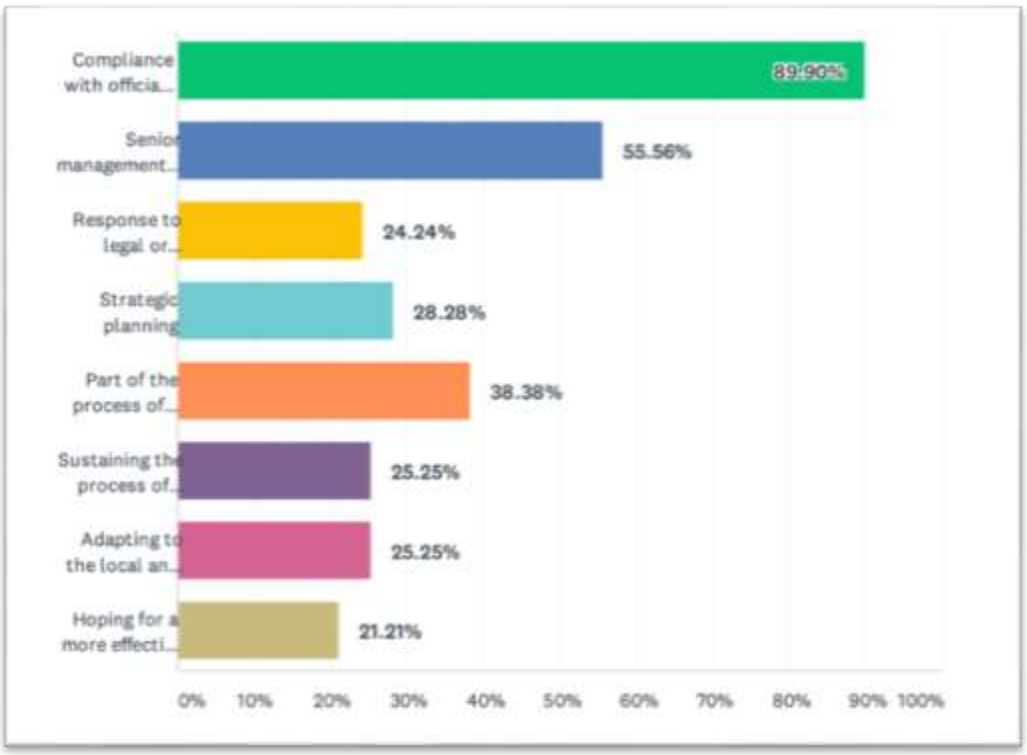


Figure 4.7 – Reasons for ERM Programme and Policy Adoption

As shown in Tables 4.17, 4.18 and 4.19, in terms of ERM adoption, the impetus for starting an ERM programme and adopting a risk management policy mainly came as a direct response to and compliance

with official regulatory laws such as those mandated by the UAE's MoE. The majority of responses representing 91.5% of the respondents in the public institutions and 84.9% of the respondents in the private institutions selected "Compliance with official regulatory laws" as the main driver for the adoption of their ERM programme. Almost half of the sample (45 administrators (95.6% of all administrators' responses) and 33 faculty members (69.7% of all faculty members responses) argued that compliance with the MoE regulations, such as the CAA *Standards*, is the main reason for their institutions' adoption of an ERM programme. The remainder of the reasons came to justify the adoption of an ERM programme as initiated by senior management decision such as by the president, the board or the chancellor (57.4% of the public institution responses; 50.9% of the private institution responses), part of the risk assessment process (46.8% of the public institution responses; 30.2% of the private institution responses), or as result of strategic planning (31.9% of the public institution responses; 22.6% of the private institution responses). One respondent cited an additional reason that can be classified under the "Compliance with official regulatory laws", with the CAA Standards being the driver. All these results match exactly the findings evidenced in the literature review, the document analysis and the interviews, which all agree that the local regulatory laws are the main drivers for the adoption of a specific type of ERM programme in UAE HEIs.

Tables 4.18 and 4.19 present additional supporting descriptive statistical data that show the reasons and impetus for starting an ERM programme at the selected institutions. The results are first presented depending on the variable of institution type, and second by relying on the role of participants' factor.

Table 4.18 – Reasons for ERM Programme and Policy Adoption by Institution Type

Statement	Public (47)		Private (53)		Missing
	#	%	#	%	
Compliance with official regulatory law	43	91.5%	45	84.9%	1
Senior management decision	27	57.4%	27	50.9%	1
Response to a failure	13	27.7%	11	20.8%	0
Strategic planning	15	31.9%	12	22.6%	1
Part of the process of risk assessment	22	46.8%	16	30.2%	0
Senior decision-making	13	27.7%	12	22.6%	0
Adapting to economic environment	12	25.5%	13	24.5%	0
Hoping for a more effective academic process, and therefore success	10	21.3%	11	20.8%	0
Others: CAA requirements	1	2.1%	0	0.0%	0

Table 4.19 – Reasons for ERM Programme and Policy Adoption by Role of Participants

Statement	Administrator (45)	Faculty Member (33)	Both (23)	Missing (0)

	#	%	#	%	#	%	
Compliance with official regulatory law	45	95.6%	33	69.7%	23	100.0%	0
Senior management decision	30	66.7%	13	39.4%	12	52.2%	0
Response to a failure	14	31.1%	4	12.1%	6	26.1%	0
Strategic planning	12	26.7%	12	36.4%	4	17.4%	0
Part of the process of risk assessment	21	46.7%	8	24.2%	9	39.1%	0
Senior decision-making	15	33.3%	5	15.2%	5	21.7%	0
Adapting to economic environment	13	28.9%	8	24.2%	4	17.4%	0
Hoping for a more effective academic process, and therefore success	7	15.6%	6	18.2%	8	34.8%	0
Others: CAA requirements	0	0.0%	0	0.0%	1	4.3%	0

Summary:

Through the results of the survey data related to ERM adoption, and as evidenced by the statistical analysis, the researcher concluded that there is a consensus among the respondents that the main reasons behind the decision to adopt a clear risk management framework policy were the need to comply with the local official regulatory laws and as a response to senior management decision-making. The results also show that the perceptions obtained from the participants indicate a good level of maturity when the participants' awareness level of ERM adoption was inquired into (47.2% of all respondents were "*Very Aware*" of the existence of ERM elements' adoption at their institutions). The results show that, in the selected UAE public universities, ERM is the term used more commonly to refer to the major adopted QA processes (with 63.8% of all respondents in public universities opting for the form of ERM). On the other hand, ERM was found to be a less commonly used term in UAE private universities. Only 35.8% of all respondents in the selected private universities agreed that ERM is the term used to identify the QA processes adopted at their institutions.

Additionally, the Mann-Whitney non-parametric test in Tables 4.15 and 4.32 show that there are no major differences in the ERM adoption awareness results when the demographic variables of institution type are taken into account. In other words, the level of awareness among respondents is almost equal whether they represent public or private universities, or whether the respondents are administrators or faculty members.

However, it is also concluded by the researcher that due to the unavailability of mandated unified government risk management policies, the selected UAE HEIs in this study opted to have their own risk management policies and processes. Therefore, by relying on the participants' perceptions, no matter what the major impetus and drivers for ERM adoption are, the application and adoption methods used in each HEI are found to be unique and different. This finding is supported by the themes obtained from the subsequent document analysis and interview study. In other words, there is no consensus or uniformity

regarding the ERM and QA adoption or implementation methods across the selected academic institutions. As for the academic effectiveness and economic aspects of ERM adoption, it was surprising for the researcher that the respondents agreed that they would not have a big impact on the decision for ERM adoption, and therefore they are not major drivers in the implementation process. This is why these drivers came at the bottom of the ranking of the resulting ERM adoption reasons list.

4.3.3 Perceptions on the Effectiveness of ERM Implementation and Integration

The respondents of the survey were asked about their awareness of and reasons for implementing and integrating ERM into their other academic processes. They were asked questions to explain the level of their awareness of ERM implementation and integration at their institutions. Their answers generally came in line with the findings of the document analysis and interviews, as will be presented in the following sections, and provided evidence of what level of ERM implementation and integration the selected institutions have achieved. The responses to these questions constituted the participants' perceptions through focus on two major components of the answers: testing the ERM implementation and integration maturity level and relying on the participants' identified demographic variables.

This part of the quantitative analysis is very much related to the previous section highlighting the perception of ERM adoption, and the following section focusing on testing the maturity levels of ERM adoption and implementation. The data obtained in this section of the study show that ERM "adoption" and "implementation" are two separate but interrelated steps, leading to full "integration" with other functions and processes across campuses. It is true that the "implementation and integration" of ERM come at a later step after "adoption", where adoption could simply mean having written proof of an ERM policy or framework, but in reality, the majority of the selected HEIs show a natural tendency towards performing the adoption, implementation and integration steps at the same time. In terms of implementation and integration, the researcher relied on responses to the survey items related to "years of ERM adoption/application" in order to decide on the maturity level of ERM implementation and integration. For this, the researcher analysed the answers of the participants with regards to the number of years that ERM has been implemented in their institutions and set the number of years in three main groups to correspond with three levels of implementation maturity as follows: 1–5 years = *initial*, 6–10 years = *moderately mature*, and 10+ years = *very mature*. Based on this analysis, Table 4.20 shows the maturity levels of risk management and ERM implementation based on the number of years of application and adoption.

Table 4.20 – Levels of ERM Implementation Maturity by Years of Application

Statement	Count	Percentage
Initial	15	15.3%
Moderately Mature	69	71.4%
Very Mature	13	13.3%
Missing value	4	3.96%
Total	**101**	**100%**

Table 4.21 – Levels of ERM Implementation Maturity by Adopted Term of Application

Statement	Initial (15)		Moderate (70)		Very Mature (13)		Missing (3)
	#	%	#	%	#	%	
RM	8	53.33%	52	74.29%	13	100.00%	0
ERM	4	26.67%	35	50.00%	10	76.92%	0
SRM	2	13.33%	8	11.43%	2	15.38%	0
QA	9	60.00%	29	41.43%	7	53.85%	1
All of the above	0	0.00%	2	2.86%	0	0.00%	0
Other; no idea	0	0.00%	0	0.00%	0	0.00%	2

From Tables 4.20 and 4.21 above, it is clear that the majority of respondents (n= 69) representing 71.4% of all the respondents answered that the duration of risk management and ERM application at their institutions range between 6 and 10 years. However, Table 4.19 shows different frequencies and rates based on the term used for ERM implementation, since the researcher gave the option to the participants of the survey to choose more than one answer. Therefore, there would be no systematic way to classify the numbers and percentages for each choice. In all cases, the answers of 74.29% of the respondents who selected "risk management", for example, assert that risk management has been used as a concept in their institutions for a period of 6–10 years, while at the same time the 50% of the respondents who selected "ERM" argue that the concept has been in use for 6–10 years (*moderately mature*). This means that the majority of responses indicate a moderately mature level of ERM implementation and integration in the selected UAE HEIs, whether the concept in use is risk management or ERM.

What this means in terms of the type of institution variable is represented in Table 4.22, where respondents from both public universities (n= 31) and private universities (n= 38) showed a "moderately mature" level of ERM implementation and integration based on the numbers of years of application.

Table 4.22 – Levels of ERM Implementation Maturity by Type of Institution

Statement	Public	Private	Missing
Initial	10	5	0
Moderately Mature	31	38	1

Very Mature	6	7	0
Missing	0	0	3
Total	**47**	**50**	**4**

The answers to item Q17 (*Which programme of risk management or QA is your institution in compliance with?*) also gives an indication of the level of awareness among the participants of ERM implementation and integration by relying on the source of their risk management framework and policies in general. In terms of standardised ERM frameworks, the majority of all participants (*n*= 65, representing 64.36%) stated that the risk management or ERM framework adopted in their institution is based on all universally accepted sources of ERM frameworks, including the COSO framework and ISO 31000, as well as local regulations and laws such as the CAA. Approximately a quarter of the respondents (*n*= 26, representing 25.7%) indicated that their risk management and ERM framework is driven by the requirement of complying with local regulations and laws. While only 1 respondent opted for "the ISO 31000" as the only source of ERM implementation process and 3 respondents opted for the COSO framework as the only source of their ERM implementation process; this gives a good indication that the greatest majority of survey participants show a good level of awareness of the ERM implementation processes at their institutions.

Tables 4.23, 4.24 and 4.25 summarise these findings and present a further analysis of ERM implementation and integration awareness based on the "type of institution" and "role of participants" variables.

Table 4.23 – ERM Implementation and Integration Based on Source of Framework

Statement	Count	Order (descending)
The COSO framework	3	1. All of the above
ISO 31000	1	2. Local regulations and laws
Local regulations and laws	26	3. Other (don't know)
All of the above	65	4. The COSO framework
None of the above	2	5. None of the above
Other (don't know)	4	6. ISO 31000

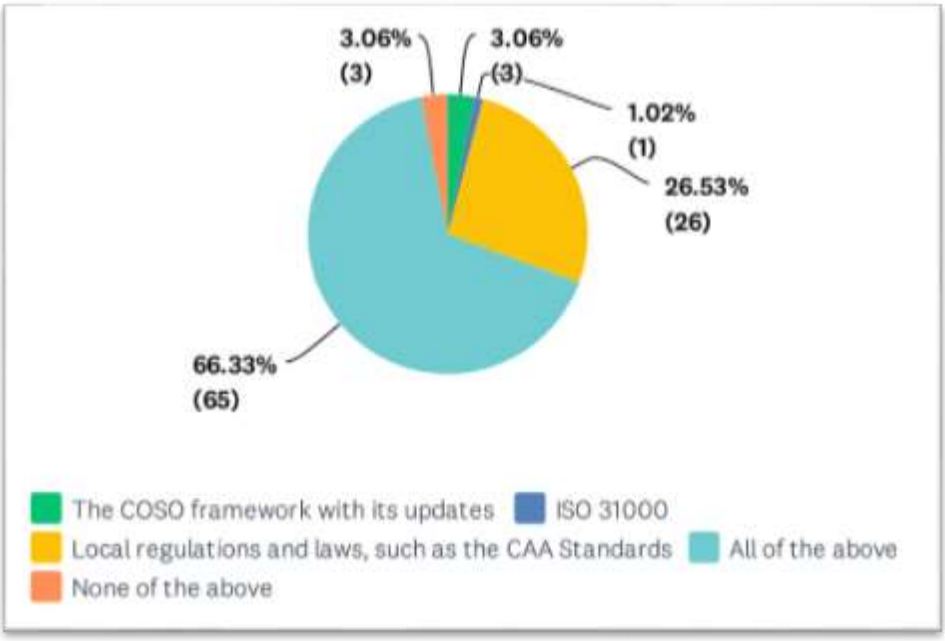


Figure 4.8 – ERM Implementation and Integration Based on Source of Framework

Table 4.24 – ERM Implementation and Integration Based on Source of Framework – by Type of Institution

Statement	Public (47)		Private (53)		Missing
	#	%	#	%	
The COSO framework	1	2.1%	2	3.8%	0
ISO 31000	1	2.1%	0	0.0%	0
Local regulations and laws	10	21.3%	15	28.3%	1
All of the above	35	74.5%	30	56.6%	0
None of the above	0	0.0%	2	3.8%	0
Other (don't know)	0	0.0%	4	7.5%	0

Table 4.25 – ERM Implementation and Integration Based on Source of Framework – by Role of Participants

Statement	Administrator (45)		Faculty Member (33)		Both (23)		Missing (0)
	#	%	#	%	#	%	
The COSO framework	0	0.0%	2	6.1%	1	4.3%	0
ISO 31000	1	2.2%	0	0.0%	0	0.0%	0
Local regulations and laws	11	24.4%	12	36.4%	3	13.0%	0
All of the above	31	68.9%	15	45.5%	19	82.6%	0
None of the above	0	0.0%	2	6.1%	0	0.0%	0
Other (don't know)	2	4.4%	2	6.1%	0	0.0%	0

Summary:

All the survey responses showed a common trend of a "*moderately mature*" level of awareness with regards to the elements of risk management and ERM implementation and integration. Having a formal and standardised risk management or ERM policy is a common practice in both private and public UAE institutions. However, the above statistical results show that the basis and level of implementation and integration may vary depending on the years of application, type of institution, and the sourcing elements included in the framework itself. For example, 74.5% of the responses in public universities (n= 35) showed an awareness of the existence of all traditional and non-traditional elements of implementation in their ERM policy, while 56.6% of the responses in private universities (n= 30) showed the same awareness of the existence of all traditional and non-traditional elements of implementation in their ERM policy.

Other elements of risk management and ERM implementation and integration are also evident in further analysis of the respondents' answers to the maturity level rating questions presented and analysed in the next section. In terms of how the selected UAE HEIs identify and assess their risk management and ERM implementation and integration processes, a more profound technique was used by the researcher in the next section where the maturity level rating was tested by asking questions especially dedicated to describing, besides adoption, initial versus advanced levels of implementation and integration. Further investigation into the levels of ERM implementation and integration was also conducted in the document analysis and interview phases of the study. The respondents in the interview phase were asked some open-ended questions to examine their awareness of the level of effective implementation of ERM framework and policies, and the themes elicited from them were very much in common with the findings of the quantitative phase.

4.3.4 Perceptions Determining the Maturity Level of ERM Implementation (Q18 to Q34)

As introduced earlier in this study, ERM "maturity levels" are measured against certain attributes as evidenced through the responses of the survey participants as well as the interviews. They range from *initial* to *very mature*, depending on the level of awareness and responses made by the participants, as further explained in section 2.4.15 of the Literature Review chapter. The respondents of the survey were asked specific questions (Q18 to Q34), not only to elicit their level of awareness and perceptions of the adoption and existence of the ERM concepts, but also to determine the maturity level of ERM implementation and integration in the institutions they represent. This section can clearly be divided into two major sub-sections, with the first containing items Q18 to Q24 meant to obtain the participants'

perceptions about the different aspects of the ERM implementation process extensively explained in the Literature Review chapter and Conceptual Framework section of this study. The second sub-section of this part of the survey study contains items Q25 to Q34 based on the Likert scale of approval ranging from "Strongly Disagree" to "Strongly Agree", with the questions also meant to measure the maturity level of ERM implementation and integration in the respondents' respective institutions.

The researcher used a questionnaire-based RMM adopted from Wieczorek-Kosmala (2014, p. 139 – see Figure 2.10) and used by several researchers in the ERM field. This RMM testing approach was extensively explained in the Literature Review chapter. This model was developed based on the works and studies of various ERM researchers (e.g., Hillson 1997, 2019; Hopkinson 2000; Chapman 2006; Deloitte 2006; RIMS 2006; Abrams et al. 2007; Marks 2011; AON 2014; Lundquist 2015; Hoseini, Hertogh & Bosch-Rekveldt 2019). For Q18 to Q24, the level of maturity of ERM implementation and integration is assessed based on response ranges of *attributes* from "A" to "D", where "A" indicates a level of prematurity, "B" shows an initial and undeveloped level of maturity, "C" refers to an acceptable level of maturity, and "D" indicates a developed and advanced level of maturity with regards to the effectiveness of ERM implementation. In other words, in the context of this study, the ERM implementation maturity level was measured by asking the respondents to place themselves on a continuum corresponding to the four levels of risk maturity *attributes* described above.

Table 4.26 presents the ERM maturity testing results for the first group of ERM maturity testing questions (items Q18 to Q24) based on the above-described and tested model. Despite some recurrent missing values due to the failure by some respondents to answer all the questions, some representative responses were obtained and are explained below based on the different demographic variables of the study. Table 4.25 shows the general statistics of the maturity test results, where the following ERM maturity design coding applies: *A = Premature, B = Moderately Mature, C = Mature* and *D = Very Mature*.

Table 4.26 – ERM Maturity Testing Results of Items Q18 to Q24

Question	A		B		C		D		Missing
	#	%	#	%	#	%	#	%	
Q18	12	12.5%	32	33.3%	34	35.4%	18	18.7%	5
Q19	20	21.1%	8	8.4%	46	48.4%	21	22.1%	6
Q20	6	6.3%	13	13.5%	54	56.3%	23	24.0%	5
Q21	15	15.5%	31	32.0%	29	29.9%	22	22.7%	4
Q22	3	3.6%	48	50.5%	25	26.3%	19	20.0%	6
Q23	18	18.8%	31	32.3%	29	30.2%	18	18.8%	5
Q24	5	**5.2%**	41	**42.3%**	31	**32.0%**	20	**20.6%**	4

The analysis in Table 4.27 presents an overall idea of the maturity levels of ERM implementation in the selected UAE HEIs based on the perceptions of the survey participants. While the highest rate is clearly for answer "C" for almost all questions, with the perceptions indicating a "Mature" level of ERM implementation, much fewer responses selected answer "D", which represents perceptions of a "Very Mature" ERM implementation in the selected UAE HEIs (C= 35.4%, 48.4%, 56.3%, 29.9% …; D= 18.7%, 22.1%, 24%, 22.7% …) Therefore, the general descriptive statistical analysis of the survey responses indicates that the majority of participants exhibit awareness of a "Mature" level of ERM implementation in their respective institutions, by choosing option "C".

Tables 4.27 and 4.28 present further statistical analysis of the ERM implementation maturity testing based on the main demographic variables of "Institution type" and "Role of the participant" identified in the study.

Table 4.27 – Risk Management Maturity Results by Type of Institution

Q	Institution type	A		B		C		D		Missing
		#	%	#	%	#	%	#	%	
Q18	Public	3	6.5%	8	17.4%	24	52.2%	11	23.9%	0
	Private	9	18.0%	24	48.0%	10	20.0%	7	14.0%	
Q19	Public	5	11.1%	2	4.4%	21	46.7%	17	37.8%	1
	Private	15	30.6%	6	12.2%	24	49.0%	4	8.2%	
Q20	Public	0	0.0%	4	8.7%	26	56.5%	16	34.8%	0
	Private	6	12.2%	9	18.4%	27	55.1%	7	14.3%	
Q21	Public	2	4.3%	10	21.7%	15	32.6%	19	41.3%	1
	Private	13	26.0%	20	40.0%	14	28.0%	3	6.0%	
Q22	Public	1	2.2%	15	33.3%	16	35.6%	13	28.9%	1
	Private	2	4.1%	32	65.3%	9	18.4%	6	12.2%	
Q23	Public	7	15.6%	6	13.3%	20	44.4%	12	26.7%	1
	Private	10	20.0%	25	50.0%	9	18.0%	6	12.0%	
Q24	Public	1	2.2%	12	26.1%	18	39.1%	15	32.6%	1
	Private	4	8.0%	28	56.0%	13	26.0%	5	10.0%	

Table 4.28 – Risk Management Maturity Results by the Role of Participants

Q	Role	A		B		C		D		Missing
		#	%	#	%	#	%	#	%	
Q18	Adm.	6	14.0%	13	30.2%	13	30.2%	11	25.6%	0
	FM	4	13.3%	11	36.7%	11	36.7%	4	13.3%	
	Both	2	8.7%	8	34.8%	10	43.5%	3	13.0%	
Q19	Adm.	8	19.0%	3	7.1%	20	47.6%	11	26.2%	0
	FM	9	30.0%	4	13.3%	14	46.7%	3	10.0%	
	Both	3	13.0%	1	4.3%	12	52.2%	7	30.4%	
Q20	Adm.	2	4.7%	7	16.3%	25	58.1%	9	20.9%	0
	FM	3	10.0%	6	20.0%	14	46.7%	7	23.3%	
	Both	1	4.3%	0	0.0%	15	65.2%	7	30.4%	
Q21	Adm.	7	16.3%	11	25.6%	14	32.6%	11	25.6%	0

	FM	6	19.4%	13	41.9%	5	16.1%	7	22.6%	
	Both	2	8.7%	7	30.4%	10	43.5%	4	17.4%	
Q22	Adm.	3	7.1%	24	57.1%	6	14.3%	9	21.4%	0
	FM	0	0.0%	16	51.6%	11	35.5%	4	12.9%	
	Both	0	0.0%	8	36.4%	8	36.4%	6	27.3%	
Q23	Adm.	7	16.7%	15	35.7%	12	28.6%	8	19.0%	0
	FM	7	22.6%	10	32.3%	8	25.8%	6	19.4%	
	Both	4	17.4%	6	26.1%	9	39.1%	4	17.4%	
Q24	Adm.	2	4.7%	21	48.8%	13	30.2%	7	16.3%	0
	FM	2	6.5%	13	41.9%	11	35.5%	5	16.1%	
	Both	1	4.3%	7	30.4%	7	30.4%	8	34.8%	

Note: *Adm. = Administrator, FM = Faculty Member*

The two analysis tables 4.27 and 4.28 provide for some interesting statistical results that help enrich the findings related to ERM maturity level testing, where the percentages pattern shows a more advanced level of ERM implementation maturity in public institutions. These tables also show how the participants' responses indicate the level of awareness among different academic stakeholders in different academic contexts. With very few exceptions, the responses from the public institutions scored higher rates for both "C= Mature" and "D= Very Mature" ratings versus private institutions: (Q18: C= 52.2% vs. 20.0% & D= 23.9% vs. 14.0%; Q21: C= 32.6% vs. 28.0% & D= 41.3% vs. 6.0%; Q24: C= 39.1% vs. 26.0% & D= 32.6% vs. 10.0%). The scores in the "A" and "B" ratings imply the reverse, where the responses from the selected private institutions show higher percentages for the "Premature" and "Moderately mature" ratings than the public institutions. These ratings indicate the finding that the selected two UAE public institutions exhibit a more advanced level of ERM implementation maturity. Relying on the role of participants' variable, it is evident that the impact of this variable on the participants' maturity ratings is minimal where the differences are minor.

This section now presents the participants' perceptions of the effectiveness of ERM implementation in their institutions in relation to QA in terms of risk maturity based on a Likert scale of approval. This part contains ten (n= 10) questions (**Q25** to **Q34**) directed to the survey participants to rate the existence and effective implementation of the following ideas, aiming to determine the level of ERM implementation maturity at their respective institutions:

- Risk management in the institution is effective and efficient in the way it is integrated into all its academic and administrative practices and processes, including QA;
- The institution's risk management and QA processes are adapted to the nature of its areas of focus and strategies;

- Risk management is implemented as a process and culture and reflected in the practices of the institution; Risk management processes are integrated into the academic and organisational processes of the institution, including QA, in an effective manner;
- The institution has a sufficient and solid understanding of all its risks;
- Effective risk management in the institution involves explicit top-down decision-making;
- Effective risk management is viewed within the institution as giving the rationale for its effective corporate governance, and therefore QA function;
- Effective risk management reporting, both internal and external, helps legitimise and consolidate effective academic internal governance and the QA process;
- Administrators' perceptions of effective risk management are crucial for the achievement of their institution's expectations and QA objectives;
- Faculty members' perception of effective risk management are vital to the learning process and meeting essential academic objectives, and therefore contributing to the overall academic QA process.

Based on the above, the respondents' answers came to reflect some level of advanced maturity by tending to answer the majority of the questions summarised above as "Agree" (with the highest overall rate of 42.99% of all answers), as seen in Table 4.28.

Table 4.29 – Risk Management Maturity Results

Q	Strongly Disagree		Disagree		Neither		Agree		Strongly Agree	
	#	%	#	%	#	%	#	%	#	%
Q25	0	0%	9	9.30%	28	28.9%	48	49.5%	12	12.4%
Q26	1	1.0%	9	9.30%	35	36.1%	41	42.3%	11	11.3%
Q27	0	0%	11	11.20%	42	42.9%	38	38.8%	7	7.1%
Q28	1	1.0%	13	13.30%	47	48%	29	29.6%	8	8.2%
Q29	1	1.0%	2	2.10%	14	14.4%	58	59.8%	22	22.7%
Q30	0	0%	2	2%	10	10.2%	49	50%	37	37.8%
Q31	0	0%	15	15.30%	40	40.8%	34	34.7%	9	9.2%
Q32	0	0%	14	14.30%	43	43.9%	31	31.6%	10	10.2%
Q33	0	0%	6	6.10%	24	24.5%	51	52%	17	17.3%
Q34	0	0%	5	5.10%	39	39.8%	41	41.8%	13	13.3%
Overall	3	**0.31%**	86	**8.80%**	322	**32.96%**	420	**42.99%**	146	**14.94%**

Table 4.30 shows the statistical analysis of ERM maturity results based on the institution type, while Table 4.31 shows the statistical analysis of ERM maturity results based on the role of the participants.

Table 4.30 – Risk Management Maturity Results Based on the Institution Type

Q	Institution type	Strongly Disagree		Disagree		Neither		Agree		Strongly Agree	
		#	%	#	%	#	%	#	%	#	%
Q25	Public	0	0.0%	2	4.3%	15	32.6%	24	**52.2%**	5	10.9%
	Private	0	0.0%	7	14.0%	13	26.0%	23	**46.0%**	7	14.0%
Q26	Public	0	0.0%	3	6.5%	18	39.1%	18	**39.1%**	7	15.2%
	Private	1	2.0%	6	12.0%	17	34.0%	22	**44.0%**	4	8.0%
Q27	Public	0	0.0%	3	6.5%	18	39.1%	23	**50.0%**	2	4.3%
	Private	0	0.0%	8	15.7%	23	45.1%	15	**29.4%**	5	9.8%
Q28	Public	0	0.0%	3	6.5%	28	60.9%	12	**26.1%**	3	6.5%
	Private	1	2.0%	10	19.6%	18	35.3%	17	**33.3%**	5	9.8%
Q29	Public	0	0.0%	1	2.2%	9	19.6%	22	**47.8%**	14	30.4%
	Private	1	2.0%	1	2.0%	5	10.0%	35	**70.0%**	8	16.0%
Q30	Public	0	0.0%	2	4.3%	6	13.0%	18	**39.1%**	20	43.5%
	Private	0	0.0%	0	0.0%	4	7.8%	31	**60.8%**	16	31.4%
Q31	Public	0	0.0%	4	8.7%	22	47.8%	17	**37.0%**	3	6.5%
	Private	0	0.0%	11	21.6%	18	35.3%	16	**31.4%**	6	11.8%
Q32	Public	0	0.0%	4	8.7%	25	54.3%	13	**28.3%**	4	8.7%
	Private	0	0.0%	10	19.6%	18	35.3%	17	**33.3%**	6	11.8%
Q33	Public	0	0.0%	1	2.2%	14	30.4%	22	**47.8%**	9	19.6%
	Private	0	0.0%	5	9.8%	10	19.6%	28	**54.9%**	8	15.7%
Q34	Public	0	0.0%	1	2.2%	15	32.6%	23	**50.0%**	7	15.2%
	Private	0	0.0%	4	7.8%	24	47.1%	17	**33.3%**	6	11.8%
Overall	Public	0	0.0%	24	5.2%	170	37.0%	192	**41.7%**	74	16.1%
	Private	3	0.6%	62	12.2%	150	29.6%	221	**43.6%**	71	14.0%

Table 4.31 – Risk Management Maturity Results Based on the Role of Participants

Q	Role	Strongly Disagree		Disagree		Neither		Agree		Strongly Agree	
		#	%	#	%	#	%	#	%	#	%
Q25	Adm.	0	0.0%	6	14.0%	16	37.2%	16	**37.2%**	5	11.6%
	FM	0	0.0%	1	3.2%	7	22.6%	19	**61.3%**	4	12.9%
	Both	0	0.0%	2	8.7%	5	21.7%	13	**56.5%**	3	13.0%
Q26	Adm.	1	2.3%	6	14.0%	16	37.2%	14	**32.6%**	6	14.0%
	FM	0	0.0%	0	0.0%	9	29.0%	19	**61.3%**	3	9.7%
	Both	0	0.0%	3	13.0%	10	43.5%	8	**34.8%**	2	8.7%
Q27	Adm.	0	0.0%	7	16.3%	20	46.5%	13	**30.2%**	3	7.0%
	FM	0	0.0%	3	9.4%	12	37.5%	14	**43.8%**	3	9.4%
	Both	0	0.0%	1	4.3%	10	43.5%	11	**47.8%**	1	4.3%
Q28	Adm.	1	2.3%	9	20.9%	22	51.2%	8	**18.6%**	3	7.0%
	FM	0	0.0%	4	12.5%	14	43.8%	12	**37.5%**	2	6.3%
	Both	0	0.0%	0	0.0%	11	47.8%	9	**39.1%**	3	13.0%
Q29	Adm.	1	2.6%	1	2.6%	4	10.3%	23	**59.0%**	10	25.6%
	FM	0	0.0%	1	3.1%	6	18.8%	20	**62.5%**	5	15.6%
	Both	0	0.0%	0	0.0%	1	4.3%	15	**65.2%**	7	30.4%
Q30	Adm.	0	0.0%	0	0.0%	4	9.3%	20	**46.5%**	19	44.2%
	FM	0	0.0%	1	3.1%	5	15.6%	20	**62.5%**	6	18.8%
	Both	0	0.0%	1	4.3%	1	4.3%	9	**39.1%**	12	52.2%
Q31	Adm.	0	0.0%	9	20.9%	19	44.2%	11	**25.6%**	4	9.3%
	FM	0	0.0%	3	9.4%	12	37.5%	14	**43.8%**	3	9.4%

	Both	0	0.0%	3	13.0%	9	39.1%	9	**39.1%**	2	8.7%
Q32	Adm.	0	0.0%	6	14.0%	22	51.2%	11	**25.6%**	4	9.3%
	FM	0	0.0%	5	15.6%	10	31.3%	14	**43.8%**	3	9.4%
	Both	0	0.0%	3	13.0%	11	47.8%	6	**26.1%**	3	13.0%
Q33	Adm.	0	0.0%	0	0.0%	7	16.3%	26	**60.5%**	10	23.3%
	FM	0	0.0%	6	18.8%	9	28.1%	14	**43.8%**	3	9.4%
	Both	0	0.0%	0	0.0%	8	34.8%	11	**47.8%**	4	17.4%
Q34	Adm.	0	0.0%	1	2.3%	24	55.8%	13	**30.2%**	5	11.6%
	FM	0	0.0%	2	6.3%	10	31.3%	15	**46.9%**	5	15.6%
	Both	0	0.0%	2	8.7%	5	21.7%	13	**56.5%**	3	13.0%
Overall	Adm.	1	0.2%	41	8.5%	147	30.3%	228	**47.0%**	68	14.0%
	FM	2	0.4%	45	9.2%	172	35.2%	192	**39.3%**	78	16.0%
	Both	0	0.0%	6	14.0%	16	37.2%	16	**37.2%**	5	11.6%

Note: *Adm. = Administrator, FM = Faculty Member*

The results of descriptive statistical analysis of Table 4.30 show the difference in perception levels between participants from public institutions and those from private institutions. However, since the researcher is using the non-parametric Mann-Whitney test for the significance of the difference between the two variables of public and private universities with regards to ERM and QA awareness and perceptions, the following Table 4.32 provides for a representation and explanation of the actuality of significance of difference between the two variables.

Table 4.32 – Man-Whitney Test showing Significance of Difference between Public and Private Universities (2)

Group	***Mean***	***Standard Deviation***	***N***	***Test***	***Test Statistics***	***P-value***
University type	Pub. = 3.69 Prvt. = 3.58	Pub. = 0.435 Prvt. = 0.556	Pub. = 46 Prvt. = 51	Mann-Whitney U	Z = - 1.510	Sig. = 0.131

Interpreting the results of Table 4.32, the researcher found that Mann-Whitney U is equal (=) - 1.510 and p-value is equal (=) $0.131 < \alpha$ ($\alpha = 0.05$). In this sense, it is concluded that there is no significant difference between public and private institutions with regards to the level of perceptions of the effectiveness of risk management implementation in their institutions. This means that the faculty members and academic administrators of both types of institutions share the same level of the level of perceptions of the effectiveness of risk management implementation in their institutions. However, the small differences in the mean, average and standard deviation happened because of sample error and the insufficient total number of responses. Therefore, it can be concluded there is no significant difference between public and private institutions with regards to the level of perceptions of the effectiveness of risk management implementation in their institutions.

By focusing on the "Agree" option only, which has the highest score as explained in Table 4.30, the above statistics clearly show that the institution type variable has some contribution to the choice of maturity testing answers by the survey participants. The statistics show that participants from the selected private universities agreed more than the participants from the selected public universities to the existence of ERM maturity elements in their institutions. The results also show that the tendency to "Agree" on the existence of ERM implementation maturity elements is more evident among faculty members and those who identified themselves as both administrators and faculty members, than administrators only. The reason why faculty members show a stronger tendency to agree is not very clear to the researcher, but one speculation could be the greater knowledge and experience of faculty members, which could have led faculty members to show clearer perceptions of a more mature ERM implementation at their respective institutions.

However, since the main aim of the researcher is to investigate the perceptions of faculty members and ERM administrators in terms of the effectiveness of ERM implementation in their HEIs, further statistical analysis of the participants' responses on ERM effectiveness maturity may be useful to the results, especially when conducted in the light of the currently adopted ERM policies and practices in UAE HEIs. For that purpose, the first part of the next section will harbour some statistical analysis of the survey results in relation to the research objective of exploring the current status of ERM policies and practices in UAE HEIs.

4.3.5 Current Status of ERM Policies and Practices in UAE HEIs

4.3.5.1 Exploring the Status of ERM Policies and Practices in UAE HEIs through Survey Questions

One of the objectives of this study is to "*explore the current status of ERM policies and practices in UAE HEIs*". In this context, the data drawn from certain survey items (Q35 to Q39 – see Appendix 2), as well as from the document analysis and interviews, will help provide evidence of the current status of ERM policies and practices in the selected UAE HEIs. More specifically, in addition to the document analysis and interviews conducted by the researcher to meet the same stated objective, survey items Q35 to Q39 were directed to the participants with the aim of meeting this objective and obtaining their perceptions of the implemented risk management policies and guidelines already adopted in their institutions. Exploring this current status includes a deep investigation into what actual policy documents are adopted, how they are adopted and implemented, who is responsible for their implementation and what elements of ERM they include. The survey participants' responses to these particular questions helped answer RQ2 and RQ3, and also show the level and maturity with regards to the risk management framework

implementation at their respective institutions.

In terms of whether the participants are aware of the existence of a clear and written ERM policy in their institutions (Q35), the participants expressed a high level of awareness that confirmed the existence of such a policy in all selected institutions. Table 4.31 shows that "Extremely aware" (38.38% of all responses) and "Very aware" (51.52% of all responses) were the two top choices of the majority of respondents (*n*= 89).

Table 4.33 – Results of Awareness Regarding the Adoption of a Clear ERM Policy

Statement	Count	Percentage	Order (descending)
Extremely aware	**38**	38.38%	1. Very aware
Very aware	**51**	51.52%	2. Extremely aware
Somewhat aware	6	6.06%	3. Somewhat aware
Not so aware	3	3.03%	4. Not so aware
Not at all aware	1	1.01%	5. Not at all aware

In a previous section on the results of ERM adoption, the results were presented in relation to the reasons for adopting a clear ERM policy or framework (item Q36). As explained in Tables 4.17, 4.18 and 4.20, the main impetus for adopting a clear risk management or ERM policy was as a direct response to and compliance with official regulatory laws such as those mandated by the CAA *Standards* of the UAE's MoE. The majority of the responses, representing 91.5% of the respondents in the public institutions and 84.9% of the respondents in the private institutions, selected "Compliance with official regulatory laws" as the main driver for the adoption of a clear ERM policy.

To further support the understanding of the status of already adopted ERM policies in the selected UAE HEIs, item Q37 was directed to obtain the participants' awareness of the major elements contained in the adopted ERM policy or framework. These elements were listed by the researcher based on the generally accepted components of risk management policies cited in the literature and further investigated in the Conceptual Framework of this study. Table 4.34 and Figure 4.9 show the list of concepts and elements agreed by the respondents to exist in the current ERM policies adopted by their respective institutions.

Table 4.34 – Elements of Currently Adopted ERM Policies

Statements	Count	Order (descending)
Risk assessment and evaluation	43	1. Risk assessment plan
Risk assessment plan	44	2. Risk assessment and evaluation
Risk tolerance	19	3. All of the above
Risk appetite	13	4. Risk mitigation
Risk impact	25	5. Risk concepts
Risk concepts	26	6. Risk impact
Risk mitigation	34	7. Quality assurance stipulations
Quality assurance stipulations	20	8. Risk tolerance
All of the above	41	9. Risk appetite
None of the above	1	10. None of the above
Other	0	11. Other

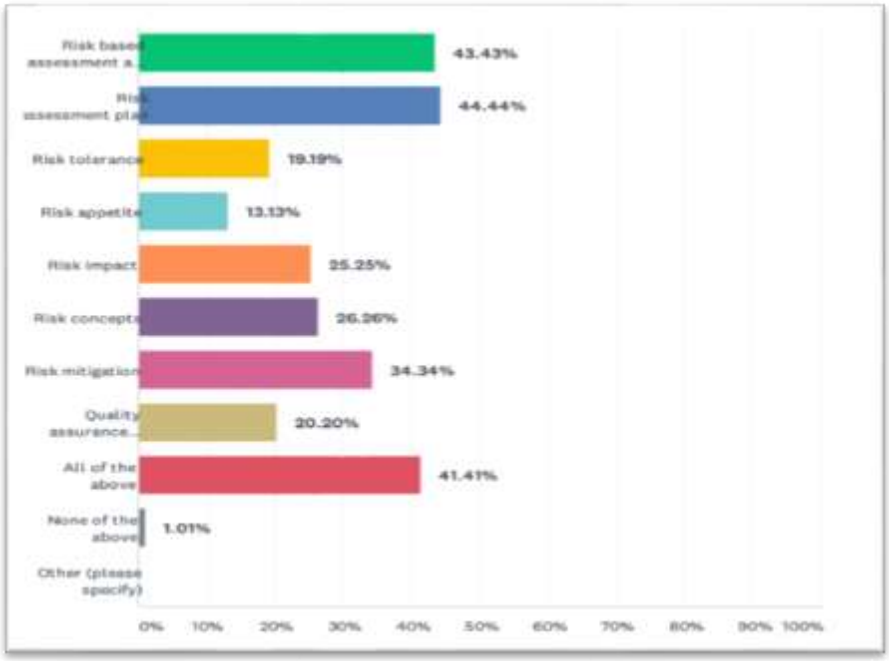


Figure 4.9 – Elements of Currently Adopted ERM Policies

The results in Table 4.34 show that 41 responses, representing 40% of all responses, selected "All of the above", indicating that the risk management policies in the selected UAE HEIs contain all the required elements, ranging from risk concepts, mitigation, impact and appetite to elements such as risk assessment and evaluation. At least half of the responses were in favour of the "risk assessment plan" and "risk assessment and evaluation" being essential elements of the existing ERM policies. Investigating the results of this question in accordance with the different demographic variables identified by the researcher led to very minor statistical differences that are not worth mentioning. All participants, whether from public or private institutions, and whether faculty members, administrators, or both, agreed on the concepts and elements contained in the risk management policies currently adopted by their respective institutions.

In summary, the statistical results of the quantitative survey confirm the conclusion that, no matter what the impetus is, all the selected UAE HEIs have adopted a clear ERM or risk management policy. The statistical results also show that regardless of the type of institution or role of the participant, all the responses agreed on the general elements and concepts adopted in the existing ERM policies. The survey results also show that 59.18% of the responses agreed that the existing ERM policies helped the selected academic institutions achieve and boost their academic effectiveness (item Q38). Through document analysis and interviews, the next sections will present further qualitative investigations into the current status of the adopted ERM policies in the selected institutions and how these policies could play a major role in the sustainment of academic effectiveness.

4.3.5.2 Exploring the Status of ERM Policies and Practices in UAE HEIs through Document Analysis

Answering RQ2 (*What are the current ERM policies and practices in the UAE HEIs?)* helped achieve the second and third objectives identified by the researcher in section 1.5 of this study. By way of conducting the final phase of the study, the researcher collected data through document analysis and interviews in order to answer RQ2 and achieve the second research objective of "exploring the current status of ERM policies and practices in UAE HEIs". The document analysis phase was planned by the researcher from the beginning of the research and conducted intermittently throughout the study along with the quantitative survey phase so that both phases informed each other, with the results integrated based on the lessons learnt from both data sources. As seen in the Literature Review chapter, the researcher provided an analytical analysis of the COSO 2017 framework and ISO 31000 guidelines, which can be considered as part of the document analysis process of this research. In this section, the research will make a detailed document analysis of the UAE CAA 2019 *Standards*, already introduced, and explained in Chapter Two of this study, as well as three risk management and academic effectiveness-related policy and manual documents that belong to three of the selected HEIs—two major public universities and one major private university.

The researcher collected data related to document analysis during the course of developing the literature review, as well as throughout the course of the quantitative study. Documents were either retrieved by the researcher from the internet or provided to the researcher by key informant participants via email, following the BUiD ethics protocol and request formalities, while also adhering to the general confidentiality and ethical requirements of the targeted HEIs. The documents were then analysed in depth using the *interactive model of document analysis* as a technique, which included data reduction

(examination, interpretation, and summarising) and data display (elicitation of meaning, synthesising of the collected data, and the development of themes and categories). In order to achieve that, the researcher followed up with key informants at several points during the process of document analysis, through telephone calls, video calls and email exchanges. The researcher then reviewed the documents by line, phrase, sentence, or paragraph segments as appropriate to the context of the document. Notes were taken from the documents and other sources to code and categorise the elicited data. The initial coding of the documents' content was based on groups of search terms and concepts, as well as key words related to the major concepts and themes of the study.

A stated in the Methodology chapter, for the document analysis the researcher adopted the interactive model of data collection and analysis, first proposed and explained by Miles and Huberman (1984, 1992, 1994), and then later developed and expanded on by Miles, Huberman and Saldaña (2014). Therefore, the process of document analysis consisted of three steps: data reduction, data display and conclusion drawing and verification. The process further included simplifying, summarising and abstracting of the main data from the documents in shorter written formats (data reduction), putting the reduced data in an organised and compressed assembly of information (data display), and finally making conclusions based on the reduced and displayed data, with verification being the final step through which the researcher tests the meaning emerging from the data (drawing conclusions). For the purposes of an informed thematic analysis, the researcher applied the above-mentioned document analysis technique to each of the chosen documents. The researcher investigated the main aspects of the currently implemented ERM standards, guidelines, and policies that UAE HEIs have, or apply, by studying and analysing the following documents:

- ***UAE CAA 2019 Standards***
- ***HEI 1*** – *Risk Management Policy Manual* and *Risk Procedures Manual*
- ***HEI 2*** – *ERM Policies and Manuals*
- ***HEI 3*** – *Risk Management Policies and Manuals*

The reason the researcher opted to analyse the mentioned documents only, despite the public availability of other relevant documents in other HEIs, is threefold. First, in the course of document reading and analysis the researcher identified repeated themes and similar results across the different selected HEIs. This gave the indication that data saturation would be the case where no new results will be obtained if more documents are analysed. The second reason is that the themes identified from the documents being analysed gave solid results that enabled the researcher to answer the research questions. The third reason

is that document analysis takes up much of the space allocated for qualitative data analysis. Therefore, there is the limitation set for word count in terms of thesis writing where the researcher attempted to avoid exceeding the allowed word count, relying on the BUiD Thesis Writing manual and the University of Bath "Guidance on word counts for final Thesis (February 2020). The themes presented in the following discussion were derived directly from the data collected through the quantitative study phase, as well as through document analysis where three main and similar thematic categories emerged from each of the documents as a natural result of the document analysis process. Examples of these themes include corporate governance and internal controls' impact, decision-making influence, effective risk management adoption, effective risk management implementation, effective risk management integration, QA in relation to ERM implementation, academic effectiveness in relation to ERM implementation, academic accreditation and ranking in relation to ERM implementation.

4.3.5.3 The UAE CAA 2019 Standards

i) Background

Introduced in 2019 by the UAE MoE's CAA, the CAA *Standards* is a policy document available for public use, retrieval and reference on the CAA's official website (referred to hereinafter as the "*Standards*"). The document was retrieved by the researcher in the early stages of the thesis writing because of its significance and importance to the research's theoretical and conceptual elements. This document was also important for the research data collection and analysis phase, and particularly for answering RQ2: *What are the current ERM policies and practices in the UAE HEIs?* It provides for the basic standards and stipulations required from all UAE HEIs to assure the quality of their educational programmes. Additionally, it is a detailed policy manual that provides for the major stipulations and criteria required by the MoE should UAE HEIs seek to be both licensed and accredited. Therefore, the *Standards* consists of two essential components:

- *The Standards for Institutional Licensure (SIL)*
- *The Standards for Program Accreditation (SPA)*

Both the SIL and SPA as complementary processes have one ultimate goal in common, that is, the establishment, sustainment and enhancement of best academic institutional performance as well as the quality of academic programmes.

It is important to understand the overall structure and layout of the document and where "risk management" fits into that structure. The *Standards* consists of eleven *Standards for Institutional Licensure* and *Program Accreditation*, "supported by a set of 11 Stipulations along with 23 Annexes, to

provide further detail and aid institutions in complying fully with the criteria of the Standards" (CAA 2019a, p. 13). The word "risk" is mentioned 44 times and is stated to hold an essential part of three of the major Standards, as well as four of the Stipulations. Risk management is integrated into the SIL and SPA, as well as governance and management, and QA. Furthermore, a whole section has been dedicated to "risk management" (Section 1.6 of Stipulation 1: Governance and Management), providing a rationale for the significance of risk implementation in HEIs.

In a sense, this document gave the researcher the assurance from the beginning of the research that all HEIs in the UAE entertain the same objectives and expectations with regards to their institutional performance and QA. It therefore gave the scope, context and purpose of the study some defensible rationale and significance. However, what really makes the *Standards* an important and strategic document to analyse in the context of this ERM study "is the introduction of a 'risk-based approach' to institutional licensure and program accreditation by the CAA" (CAA 2019a, p. 9).

ii) Themes of the CAA Standards Document Analysis

Upon detailed thematic review and scrutiny of the *Standards*, and using the *interactive model* of qualitative data analysis, the researcher concluded three major themes related to the study purpose, problem statement and more specifically RQ2. As stated earlier, by using some search techniques in the document, it was found that the word "risk" was mentioned 44 times in different contexts and sections. Highlighting the sections where the word "risk" was used helped the researcher make use of the *data reduction* technique as the first of the three major components of the interactive model of data analysis introduced and further researched by Miles and Huberman (1984, 1992, 1994, 2014). Three themes emerged from the data reduction process and helped in the *data display* phase. The display of these three themes not only helped the researcher answer RQ2 (as well as RQ3), but also came to support the answers and findings of the quantitative part of the study and answer RQ1. Table 4.33 shows the major themes obtained from the interactive model document analysis of the *Standards*, which helped answer RQ2.

Table 4.35 – CAA Document Analysis Themes

	Data Reduction & Data Display	***Drawing Conclusions & Theme Details***
Theme 1	Institutional licensure and programme accreditation (SIL & SPA); risk-based institutional reviews; programme reviews; external review team; determining risk level	Risk management adoption as a mandatory and essential component to HEIs' corporate governance bodies, rather than an option.
Theme 2	Risk evaluation; risk evaluation determinants; applications for SIL and SPA; 3/5/7-year review cycles	Risk management as a quantifiable QA measurement tool for academic institutional licensure and accreditation.

Theme 3	Stipulations; required for both SIL and SPA; good academic practice; met effectively; QA at the heart of HEIs' processes; effectiveness and QA	Risk management implementation as a major contributor to the academic programme accreditation, institutional effectiveness and QA.

- ***Theme 1****: Risk management adoption as a mandatory and essential component to HEIs' corporate governance bodies, rather than an option.*

The introduction of a "risk-based approach" to institutional licensure and programme accreditation by the CAA (2019a, p. 9) presented risk management as a mandatory and essential element that HEIs' governance bodies cannot avoid:

> A new addition to the Standards 2019 is the introduction of a 'risk-based approach' to institutional licensure and programme accreditation by the CAA. This context-sensitive assessment of institutional performance is determined against baseline regulatory requirements. The risk level of institutions is identified according to the threshold risk level as determined by the CAA.

Since, according to the *Standards*, programme licensure is mandatory for acknowledgment, accreditation, and ranking, both risk-based institutional reviews and programme reviews are required to determine whether an HEI meets the requirements of both the SIL and the SPA, with the researcher finding that the adoption of some sort of risk management by any HEI in the UAE does not seem to be an option. It is the external review team's decision that will determine whether an HEI's risk level is low, medium, or high. All the SIL and SPA processes are centred around the fact that an HEI must provide a "full understanding [and awareness] of the implications of risk evaluation for different providers, their students and other stakeholders" (CAA, 2019a, p. 9). In a sense, the study was based in the first place on this premise, where the researcher conducted some investigation on the requirements by the CAA that HEIs in the UAE must be subject to a risk-based evaluation exercise should they wish to obtain their licensure and accreditation.

- ***Theme 2****: Risk management as a quantifiable QA measurement tool for academic institutional licensure and accreditation.*

Upon analysis of the *Standards*, the researcher identified a quantifiable relationship between academic programmes' accreditation and risk management implementation. The *Standards* stipulates that at the end of the licensure review, being one of the most important stages towards an HEI's successful licensure and later official accreditation, two risk evaluation determinants need to be conducted in order to ensure the finalisation of the licensure process:

- ***Risk Evaluation Part A***: considers the extent to which the HEI (during the licensure visit) has provided evidence of meeting the requirements of the *Standards*.

- ***Risk Evaluation Part B*:** evaluates the risk of strategic, operational, legal, and financial, academic and international dimensions as applied to specific risk statements. The five risk dimensions have been determined to effectively fit across the *SIL* and the *SPA*.

(CAA 2019a, p. 9)

In this sense, the risk level of institutions is identified according to the threshold risk level as determined by the CAA. The risk levels establish the ongoing review arrangements for HEIs on a schedule of three-, five-, or seven-year visit cycles. Successful applications for Institutional Licensure or Program Accreditation will be shown on the CAA website. One statement from each section of the Risk Evaluation Part B will be included on the CAA website to provide a public overview of the findings of the review: *Strategic*, *Operational Legal and Financial*, *Academic*, and *International*.

- ***Theme 3***: *Risk management implementation as a major contributor to the academic programme accreditation, institutional effectiveness, and QA.*

The CAA claims that by all means their *Standards* helps HEIs meet their quality and effectiveness objectives. The researcher, in the CAA context, found it very convenient to link the introduction of risk management to academic institutional licensure and accreditation with the achievement of the academic programme accreditation, institutional effectiveness and QA. With the refinement of the *Standards*, the CAA managed to clearly identify a set of eleven Stipulations required for both the SIL and SPA. These Stipulations "describe *good* academic practice and explain to providers how each of the Standards can be met *effectively*" (CAA 2019a, p. 11), with "good" and "effectively" in the sense that academic practice is not a haphazard occurrence, but rather a systematic way of meeting institutional objectives. If these Stipulations are adopted and implemented regularly and ideally, the CAA (2019a & 2019b) claimed they should help each HEI ensure the quality of their programmes, as well as the whole teaching and learning process they provide to their students.

As concluded in the literature review of this study, the researcher agrees with the CAA that QA, or Standard **2**, is the ultimate achievement that all HEIs must aspire to attain. Standard **2** is supported by Annex 8 *Quality Assurance Manual (*CAA 2019a, p. 88), which further details the requirements of a QA system and unit in every licensed and accredited HEI. For the CAA (2019a), QA must be at the centre of HEIs' endeavours towards achieving high quality and effective academic programmes. With the application of the *Standards* in academic programmes, it is now clear how academic QA can best be attained by HEIs. The *Standards* has identified the means and quantifiable measures (as detailed in Theme 2) through which HEIs are able to meet common expectations for academic and institutional quality and programme effectiveness.

Therefore, through using the interactive document analysis techniques, the researcher found that these risk-based measures need to exist and be ideally implemented in HEIs, and they include:

- Using solid risk analysis and management centred measures to help better understand how successful risk evaluation leads to successful academic programme management and effectiveness.
- Setting a QA manual that evidently encompasses all QA policies, procedures, and activities, and "shows how they are integrated into a single system to continually appraise and improve the institution as a whole and its programs, services, and operations, including any joint programs" (CAA 2019a, p. 30).
- Setting up an independent QA unit responsible for implementing the institution's internal QA system.
- Using the results of evaluations for better planning.
- Using evaluation tools, both direct and indirect, to measure academic programme effectiveness.
- Setting priorities and enhancing academic programmes.
- Benchmarking the institution's quality and performance against best local and international practices.
- Using the results of an institution's reviews of programme effectiveness in its self-studies for external reviews and accreditations.

iii) Summary

Therefore, the themes obtained from reviewing the CAA *Standards* show that the risk-based approach to institutional licensure and programme accreditation determines how an institution can achieve their required performance through a solid programme accreditation process and manageable QA. One of the basic aspects learned from the *Standards* is that risk management can and should be implemented through "baseline regulatory measures" mandated through quantifiable measures. The risk-based approach, as discussed in Theme 2 of this document analysis, is a major contributor to this fact. It is clear that, according to the *Standards*, effective operation of the institution's QA and institutional effectiveness must be carried out through a separate independent office that comes at the heart of its institutional and programmatic development. As will be seen in the risk management and QA document analysis of several selected UAE HEIs (see sections 4.2.3.2, 4.2.3.3 and 4.2.3.4), "evidence-based improvements to programs, support services and administration must be embedded in the institutional culture and its internal QA systems" (CAA 2019a, p. 9).

4.3.5.4 HEI 1 ERM Policies and Manuals (Risk Management Policy Manual and Risk Procedures Manual)

i) Background

HEI 1 is one of the three accredited and acclaimed public universities in the UAE. The Risk Management Office and the PROVOST Office of HEI 1 were very supportive and responded swiftly, providing the researcher upon first request with the required ERM policy documents. The two provided policy documents show tangible evidence of the HEI 1 adoption and implementation of ERM. These two important and strategic risk-related documents (policy and producers) include:

- *Risk Management Policy Manual* (26 pages)

This document is available within the HEI 1 Risk Management Office and was obtained through official communication with and request from the Research Office of HEI 1 on the 22nd of December 2020. HEI 1 stated that the purpose of this document is to outline their "ERM Policy which provides the foundations for the design, implementation, monitoring, review and continual improvement of ERM activities across the organization" (p. 9). The policy comes in three chapters: one defining the policy, a second detailing the ERM policy and its integration into the academic processes, and a third covering the business continuity management policy and its relationship with ERM implementation.

The researcher found that this policy document represents an ideal risk management, and more particularly ERM policy manual, that includes and covers all areas of the risk management process. It not only caters for the standard risk management process of risk identification, risk analysis and risk evaluation, but also attends to establishing the context of ERM in higher education and its integration into different academic processes and discusses the awareness (perceptions) of the academic process stakeholders, as will be seen in the themes identified by the researcher. This, in fact, helped the researcher not only answer RQ2, but partially RQ1 as well.

- *Risk Procedures Manual* (72 pages)

This document is available from the HEI 1 Risk Management Office and was obtained through official communication with and request from the Research Office of HEI 1 on the 22nd of December 2020. HEI 1 mention under their "Objectives of the Manual" heading the purpose of this document (the "Manual"): "The purpose of this manual is to set out the University's approach to risk together with the means for identifying, evaluating and treating risk in order to minimize the potential for negative impact and to enhance the potential for opportunity" (p. 5). In this sense, the first document sets the criteria and guidelines for implementing ERM in what HEI 1 name a Policy, and in the second one HEI 1 describes

in detail the process and activities required to implement ERM and therefore achieve the desired objectives. The Manual is designed in four chapters covering the background and purpose information, the exact procedures for establishing and implementing ERM, and some visual representations of the processes and forms required for effective ERM implementation.

ii) Themes of the HEI 1 Document Analysis

While reviewing both the ERM Policy and Procedures Manual documents of HEI 1, the researcher followed the interactive data analysis model to obtain three major themes that helped answer RQ2 (and partially RQ1).

Table 4.36 – HEI 1 Document Analysis Themes

	Data Reduction & Data Display	***Drawing Conclusions & Theme Details***
Theme 4	Key performance indicator; key controls; event; roles and responsibilities; process map; comprehensive ERM framework implementation; mandatory for all employees	ERM implementation is not a coincidence or gap filler: it must entail a clear and defined process owned by an independent risk management unit and performed by specialised and dedicated risk unit members.
Theme 5	Integration of ERM with different processes; effectiveness and QA functions; business continuity management	Academic programme effectiveness, QA and the ERM implementation process can and do exist as separate but interrelated functions.
Theme 6	ERM implementation; corporate governance; internal control; Executive Leadership Committee; functional areas	UAE HEIs can evidence a good representation of corporate governance and internal controls through their ERM implementation.

- ***Theme 4***: *ERM implementation is not a coincidence or gap filler: it must entail a clear and defined process owned by an independent risk management unit and performed by specialised and dedicated risk unit members.*

Both HEI 1 ERM Policy and Procedures Manual documents show evidence of how ERM can and must be implemented as a "mandatory" procedure rather than a choice. In its definition of usage and control of both the Policy and Procedures Manual, HEI 1 state that "adherence to the provisions and requirements of this document is mandatory for all employees" (Policy, p. 5; Procedures, p. 7). By implication, all staff and members of the institution are required to comply with ERM procedures and criteria, and through key performance indicators they must show evidence of fulfilling ERM implementation. Chapter 2 of the Procedures Manual sets eight important processes towards the application and effective implementation of ERM, most importantly including Risk Monitoring, Recording, Reporting, Business Continuity

Management, and Risk Management Assurance. Each of these eight processes includes a definitive and quantifiable key performance indicator with a target value and completion time, which make it compulsory for staff to comply with.

The HEI 1 Risk Management Policy Manual and Risk Procedures Manual documents also show evidence of events tied to start and end dates and a process map, as well as entry and exit parameters. In other words, in addition to making it an ideal, traceable, and manageable institutional process, this helps drive a message to all stakeholders of the academic process that ERM is strategic to their assigned functions. In fact, the ERM Policy of HEI 1 goes further to state that ERM is applicable not only to all colleges, departments and sections, but also to all "strategic and governance activities". Additionally, the Quality Assurance Manual document of HEI 1 makes cross-references to the risk-based programme reviews mandated by the CAA *Standards*. The requirement for these risk-based review cycles stresses the notion that risk management adoption and implementation by public universities in the UAE, such as HEI 1, is not a choice but rather represents the fulfilment of the federal authorities' mandates applicable for and mandatory to all HEIs in the UAE.

Based on this, the researcher has concluded that this mandatory designation to the whole ERM process of adoption, implementation and integration needs to be emphasised as a major element in the researcher's proposed guidelines, to be completed at the end of this study.

- ***Theme 5***: *Academic programme effectiveness, QA and the ERM implementation process can and do exist as separate but interrelated functions.*

Minor reference is made to academic effectiveness and QA functions being the outcomes of ERM process adoption and implementation. Under the "*Integration of ERM with Different Processes*" heading (p. 18), it is clear that the HEI 1 Policy does not include the two major functions of academic effectiveness and QA as being integrated within the ERM process. The HEI 1 ERM Policy rather mandates the integration of ERM with functions such as internal audits, business continuity management, strategic business planning, and key information systems (Policy, p. 18). This clearly indicates that HEI 1 intentionally separated ERM implementation from programme effectiveness and QA for their own decision-making and institutional requirement purposes. A "*Quality Assurance Manual*" does exist as a separate but complementary and interrelated document that sets up the criteria for academic QA and programme accreditation through risk-based requirements. The researcher took note of this and planned to further question the nature of the relationship between ERM as a function or department with effectiveness and

QA functions, in an interview analysed in the interview data analysis section. To this added question, the interviewee from this institution answered:

there are basically several levels of quality assurance implementation at the institution. This is number one. Number two, there are different requirements for the general risk management-based qualifications. So, for the academic quality assurance, we do rely on the requirements of national and international accreditation bodies of the programmes offered at our institution, but in terms of relationship between the two functions, I would say they are still separate from each other but surely interdependent (IP1).

However, the researcher concluded that by focusing on "business continuity management" the Policy provides for the real interpretation of ERM implementation in its original genesis. Since ERM is originally a business-oriented concept, the HEI 1 ERM Policy manages to, or at least shows some serious attempts to migrate this concept and adapt it into an academic context of a representative UAE public university such as HEI 1.

On the other hand, upon review of the HEI 1 QA document, as stated earlier, the document showed clear references to the interrelatedness between risk management and QA and institutional effectiveness. The QA of academic affairs at HEI 1 has a number of particular, well-defined requirements that are based on risk management and form a part of HEI 1's core business. These requirements specifically address the teaching and learning processes and include, among other items, the "Quality assurance of existing degree programs, including assessment of student learning and risk-based programme review" and "Performance evaluation of the teaching faculty". HEI 1 in this context views QA as a process based on key elements that take life and meaning from its risk-based programme review that aims at enhancing the learning outcomes' assessment and helping the faculty promotion and evaluation process. These risk-based programme review cycles come exactly in line with the federally issued regulations of academic programme accreditation as mandated by the UAE CAA *Standards*. The review process came as a major development that was covered under themes 1 to 3 in the previous section while analysing the CAA *Standards* document. These risk-based programme reviews, as evidenced in the introduction and presentation of themes 1 to 3, are measurable factors that lead to academic programme' effectiveness and sustain QA.

- ***Theme 6****: UAE HEIs can evidence a good representation of corporate governance and internal controls through their ERM implementation.*

Both the Risk Management Policy and the Procedures Manuals show that ERM is essential to all strategic governance activities. In fact, and as stated earlier in the literature review and the Conceptual Framework of the study, ERM implementation is the ownership of the senior executive management of the institution. The Conceptual Framework of this study concluded that internal controls are the essential pillar for the ERM implementation process. HEI 1 gave the internal control authority to the Vice Chancellor, as is the case with several other HEIs in the UAE. In this context, the corporate governance internal control ensures the full oversight, management, and implementation of the ERM process as "The Executive Leadership Committee is responsible for ensuring ERM practices are in place within their respective functional areas and are applied consistently with the [HIE 1's] ERM Framework" (Policy, p. 11). Additionally, HEI 1 decided that ERM is not only applicable to all colleges, departments, and sections, but also "for strategic and governance activities that are undertaken by the [HIE 1] Executives and Senior Management" (Policy, p. 10).

Theme 6 is also informed by HEI 1's assurance of the fact that some of the main objectives of ERM implementation include to:

- "Instil increased confidence in [HEI 1's] corporate governance and ability to deliver services.
- Integrate risk management into daily activities, decision-making, and strategic direction of [HEI 1];" (Policy, p. 9)

Furthermore, these the Risk Management Policy and the Procedures Manuals present a detailed and clear ERM governance model that shows how reporting in the ERM process is carried out and defines exactly the order of information flow.

iii) Summary

Themes 4 to 6 obtained through the document analysis of HEI 1's ERM the Risk Management Policy and the Procedures Manuals show that ERM can be, and indeed is implemented effectively and integrated into the academic processes of an HEI. They also show a coherence with the stipulations and standards mandated by the CAA *Standards*, where the risk-based approach to programme review and evaluation is integrated by HEI 1's ERM Policy into at least eight of its major processes and functions. However, and by way of answering RQ2, the main aspect identified from the major themes of the HEI 1 document analysis is the absence of reference to QA and academic programme effectiveness as two major functions proven by the literature and previous research to be interrelated to ERM implementation. It was later identified by one of the interviewees in the same HEI 1 that those two functions are handled separately

and independently away from ERM, despite the fact that in the QA and effectiveness policies and procedures, HEI 1 ensured that the risk-based approach is covered and implemented. This is further discussed by the researcher in the interview data analysis section.

4.3.5.5 HEI 2 ERM Policies and Manuals (The Risk Management Policy)

i) Background

The Risk Management Policy adopted by HEI 2 was developed around the year it was established in 2007 and witnessed several rounds of revision, with a very large and main upgrade in 2017 in order to adapt to the largest merger growth that HEI 2 had witnessed since its establishment. HEI 2, through a supreme state decree, led the merger with major petroleum and energy provider establishments in the UAE, which all ultimately fell under its board of directors. The policy was drafted and published by the audit team in HEI 2, and was based on the ISO 31000, COSO (2004, 2017) framework, and the Chartered Institute of Management Accountants (CIMA) guidelines. Through the interview with the participant selected from HEI 2 (IP1), it was identified that the Risk Management Policy adopted by HEI 2 is still a high-level document mandating the formation of a committee to cover within its scope both academic and non-academic units across the campus. Since the policy was based on CIMA consultancy and guidelines, as evidenced in the document itself and as stated by the interviewee, it relies heavily on the traditionally accepted COSO framework guidelines for risk management. It is simply structured in a way to define risk and risk management, and introduce the need to identify risks, then do risk assessment, then the risk mitigation, and then document the risks through a standard risk register, as well as conduct risk maintenance, risk monitoring and review, and so forth. The policy also mentions that the committee that falls under the supervision and direct management of the board of directors is in charge of risk management policy in HEI 2 and is responsible for overseeing and implementing the whole risk management process.

ii) Themes of the HEI 2 Document Analysis

Three major themes were obtained from the document coding in relation to HEI 2 through the interactive data analysis model followed by the researcher, which helped answer RQ2, as summarised in Table 4.35.

Table 4.37 – HEI 2 Document Analysis Themes

	Data Reduction & Data Display	***Drawing Conclusions & Theme Details***
Theme 7	The internal environment; organisational appetite for risk; organisational objectives; risk appetite; risk assessment; risk responses affecting how risks may be mitigated	*Risk management as a concept does not have to be referred to as ERM if risk management is required to cater for all areas of effective ERM.*
Theme 8	Distinguishing between risks and opportunities; risk likelihood and impact	*The absence of full awareness of the policy and its guidelines among academics led to the misconception that risk means only something bad or negative.*
Theme 9	Control activities; QA; ensuring that risk responses are carried out effectively; risk management system should be regularly monitored and evaluated	*The absence or lack of practical implementation of the policy guidelines led to the misconception among academics that forms of QA processes are surplus to the academic process.*

- ***Theme 7****: Risk management as a concept does not have to be referred to as ERM if risk management is required to cater for all areas of effective ERM.*

ERM is not mentioned as a terminology in the Risk Management Policy of HEI 2. As is the case with the majority of private HEIs in the UAE, as the pilot study shows, the HEI 2 Policy uses the term *risk management* only, and yet it has all elements to comply with the ERM requirements of ISO 31000 and the COSO framework. In this context, this in itself confirms the fact that risk management as a concept does not have to be referred to as ERM per se, if risk management is required to cater for all areas of effective ERM or QA. Additionally, the HEI 2 Policy guidelines are comprehensive enough to suggest that it is not mandatory for risk management stakeholders to refer to their exercise as ERM if they elect to achieve their organisational objectives while performing the risk management process, starting with risk identification and reaching into risk mitigation and resolution planning.

Additionally, thematic coding helped the researcher identify areas in the policy of HEI 2 where the risk management officer and committee are responsible for integrating the guidelines into the organisational culture of the academic programmes. The policy clearly states that this procedure is supported by the institution's management. Even though the content of the policy does not make direct reference to strategy-related planning, operational and academic objectives are accounted for in a way where the risk management responsibility is assigned throughout the institution to all heads and staff of all departments. The policy's thematic coding indicates a standard risk management process being applied through

supporting accountability, performance measurement, and programme evaluation and accreditation efficiencies.

- ***Theme 8****: The absence of full awareness of the policy and its guidelines among academics led to the misconception that risk means only something bad or negative.*

The policy states that through risk assessment, the risk management stakeholders analyse risks in terms of distinguishing between risks and opportunities in order to determine how risks should be managed. This commonly accepted concept among risk management practitioners and researchers is well reflected in the policy. However, through the document analysis, questionnaire responses and interview made at HEI 2, the researcher identified a trend that indicates insufficient awareness among both faculty members and administrators of the existence of the policy in the first place. This led to the misconception among all respondents that risks are only associated with uncertainty and negative incidents that may adversely impact the academic process at large.

As introduced by the researcher earlier in the Literature Review chapter, while defining the terms *risk* and *risk management*, it was found that only associating risk with uncertainty is the outcome of a lack of understanding of the concept or ignorance of its existence. In support of Theme 8, in her definition of "risk" Lundquist (2015, p. 13) posited that "uncertainty exists whenever the knowledge or understanding of an event, consequence, or likelihood is inadequate or incomplete". Hampshire (2012) stated that ERM tends to avoid classifying risks as good versus bad, but rather that risks need to be identified and understood so an institution can most proactively and effectively react with better planning. This would apply to the definition of the concept of risk as well as the awareness of its policy and implementation. IP1 selected from HEI 2 emphasised this finding when he assured that the majority of faculty members and administrators in his institution are not familiar with the policy, and therefore with its implementation and effectiveness. Consequently, according to the interviewee, when asked about risk, the majority of faculty members and administrators would express their beliefs that risk management is when an institution reacts to an incident or hazard that could negatively impact one of its functions, departments or resources.

- ***Theme 9****: The absence or lack of practical implementation of the policy guidelines led to the misconception among academics that forms of QA processes are surplus to the academic process.*

Upon analysis of the HEI 2 Policy, the researcher identified all elements that are supposed, in theory at least, to help the academic institution achieve their objectives of QA, and therefore their overall academic

processes. However, just like other HEIs under investigation in this study, there is always a difference between theory and practice. Further investigation into the HEI 2 case, carried out through the survey questionnaire and in-depth interviews, showed a sort of absence of awareness among academics, both administrators and faculty members, of the presence of practical implementation of the policy guidelines across different departments of the institution. IP1 averred the fact that at least 80% of faculty members, those who do not work in QA as part of their job description, or as mandated by the management at their institution, still argue that any form of QA is there just to please the academic accreditation partners. In this context, according to them it is not something that could or will create organisational change or have a real impact on the academic process. Even when they complete forms and templates in relation to the policy guidelines, they do it in a way to reduce any liability that could negatively impact their responsibilities or career at a later date. For them, in short, it is a data-filling exercise that they conduct as a response to an assignment or task. The policy's biggest highlight is that it does not make a reference to QA, nor does it include QA either as part of the process or as an outcome of it, but rather it makes a reference to the stipulations mandated by the CAA for risk management reviews and programme accreditation.

This finding should contribute to one of the recommendations made by the researcher in Chapter Five of the thesis. Risk management stakeholders are required to establish a tone that fits the prevalent corporate culture at their academic institution. Additionally, because the policy to a degree fails to make a link between the risk management process and academic QA, the academics at HEI 2 are still not able to digest the concept of QA in its entirety, a concept that has been present in the business sector for decades. In summary, the findings relating to the HEI 2 document analysis show that many of the academic administrators and faculty members argue that any form of QA exercise is a luxury and they do not have confidence in its outcomes. This finding was also supported by the statements of IP1 from HEI 2 who asserts that the academics in UAE HEIs in general, and in his HEI in particular, argue they have to address any form of QA or risk management as a response to the accreditation requirement only.

In this sense, the policy manifests itself as a routine data-filling tasking document that makes risk management appear surplus to the academic process. There are very few academics or universities that argue in favour of the fact that the details of QA documentation would make any added value, at least to their academic operations. IP1 confirmed that no matter what these documents include, should they not include any binding terms to enforce the implementation of their guidelines as directed by the board of directors or senior management, these documents will not add any practical value to the achievement of

QA or the enhancement of academic processes. In general, faculty members mainly focus on two objectives: teaching and research. These remain their priority unless the decision makers tell them otherwise.

iii) Summary

Through the extensive document analysis of the HEI 2 Policy, three major themes were identified that would inform on the nature of the risk management guidelines being implemented at the institution. These themes were supported by the information provided by the interview conducted with P1, who provided very detailed information on the extent to which the guidelines of the policy are implemented.

As a general conclusion from the analysis of the HEI 2 Policy, it became clear to the researcher that risk management can be effective and bring about organisational change as a standalone process, even if it is not referred to as ERM or if kept separate from the QA function. However, as will be evident in the analysis of the HEI 3 policy documents, the absence of ERM implementation would still suggest a lack of maturity in terms of risk management implementation. Another conclusion identified in the review of these themes is that in the UAE higher education context, public universities exhibit a clearer form of ERM implementation, at least as evidenced in the analysis of the risk management policy documents of public universities. The findings of the survey also provide for a better and more encompassing understanding of this conclusion based on the detailed statistical analysis of the survey responses.

4.3.5.6 HEI 3 ERM Policies and Manuals (Risk Management Policies and Manuals)

i) Background

The HEI 3 showed good evidence of its adoption and implementation of risk management by sharing with the researcher two important and strategic risk-related (policy and procedures) documents:

- *BUiD Risk Management* (3 pages; available online, and retrieved by the researcher from the BUiD website on the 22nd of December 2020)

When retrieved from the HEI 3 website, the document's latest review date was stated to be September 2020, and the next review date was January 2021. The policy is prepared, reviewed and executed by the Chief Administrative Officer at the HEI 3, who falls under the ultimate control of the Organisation and Governance section. It shows that risk is approached very broadly and generally. No trace of or reference to ERM was noticed by the researcher. This makes the policy an example of where ERM is not really implemented in a UAE HEI, and where it needs to be implemented. HEI 3 defines the purpose of this policy document as twofold: "to manage the risks that its operations may face in its reputational, human,

financial, and physical resources", and to "observe the requirements of its operations, and adhere to the laws of the United Arab Emirates" (p. 1).

- *BUiD Institutional Effectiveness* (4 pages; available online, and retrieved by the researcher from the BUiD website on the 22nd of December 2020)

When retrieved from the HEI 3 website, the document's latest review date was shown to be March 2018, and the next review date was January 2021. However, when revisiting the new updated version of the policy, it was found out by the researcher that it was prepared, reviewed, and executed by the Head of Institutional Effectiveness at the HEI 3, who falls under the ultimate control of Organisation and Governance section. This policy sets the responsibilities for the Office of Institutional Effectiveness at the institution, with QA being the ultimate goal to be achieved by the Office, in collaboration with all concerned stakeholders in the university. HEI 3 defines the objectives of the Institutional Effectiveness document in that it aspires to help the institution achieve its unique missions and goals. Institutional effectiveness is further defined by HEI 3 within the context of institutional research: "The University's strategic planning process is informed on a continuous basis by reference to quantitative and qualitative assessments and evidence generated by a framework of evaluative and consultative activities referred to as '*Institutional Research*'" (p. 1).

ii) Themes of the HEI 3 Document Analysis

Upon review of both the Risk Management and Institutional Effectiveness policies of HEI 3, the researcher followed the interactive data analysis model to extract three main themes that helped answer RQ2 (and partially RQ1), as follows.

Table 4.38 – HEI 3 Document Analysis Themes

	Data Reduction & Data Display	***Drawing Conclusions & Theme Details***
Theme 10	Scope; definitions; responsibilities; absence of reference to "ERM"	In terms of risk management processes, an HEI is not mature enough when risk management is not referred to as "ERM".
Theme 11	Scope; definitions; responsibilities; absence of cross-references to risk management and institutional effectiveness between both documents	Risk management and institutional effectiveness are kept as two separate functions.
Theme 12	Scope; definitions; responsibilities; absence of cross-references to risk management and institutional effectiveness between both	In the context or ERM implementation, both the Risk Management and Institutional Effectiveness policies are simplistic and require elaboration.

	documents; absence of reference to risk management as a "process"	

- ***Theme 10****: In terms of risk management processes, an HEI is not mature enough when risk management is not referred to as "ERM".*

Even though HEI 3 does not refer to risk management as "ERM", its Risk Management Policy still fulfils the requirements of the SIL, and SPA mandated by the CAA *Standards*. Identified aspects of HEI 3's Risk Management Policy show that the rationale, scope, definitions and responsibilities of stakeholders with regards to risk management as a function do not make a reference to risk management in the enterprise context. This theme constituted a very important finding for the researcher since the early stages of the study and informed the answers and data conceived from Q18 to Q34 of the survey, which were based on the questionnaire based RMM adopted by the researcher. It gave the researcher a hint that not all UAE HEIs, and particularly the private HEIs, exhibit or own any kind of ERM inclusion within their risk management and institutional effectiveness policies. The interviews with interviewees from different private HEIs showed similar findings in the sense that not all HEIs in the UAE refer to their risk management programmes through the ERM terminology.

However, as concluded by the researcher in the Literature Review chapter and the Conceptual Framework, this does not change the fact that ERM is not completely absent as an organisational aspect from a given institution. It was concluded by the researcher in the literature and theoretical review of this study that elements of risk management are dominantly present in ERM, and the opposite also holds true. However, since the quantitative and qualitative findings of the study show that several representative UAE HEIs exhibit evident, more comprehensive and more solid risk management process implementation in the format of ERM (i.e. HEI 1 and HEI 2), it is concluded by the researcher that more efforts are recommended to be exerted by other UAE HEIs towards the actual adoption and implementation of ERM in its exact terminology and usage implications.

As concluded in the quantitative data analysis of the survey results, all selected UAE HEIs entertain some level of organisational maturity with their risk management process. However, the researcher concluded that HEIs adopting ERM in its commonly known and defined format (as supported by the literature and the findings of the study) may have the benefit of exhibiting a more mature risk management framework to guide and help them expedite their movement through the four risk management maturity levels defined in section 2.4.15 of this study.

- ***Theme 11****: Risk management and institutional effectiveness are kept as two separate functions.*

While reviewing both the Risk Management and Institutional Effectiveness policies of HEI 3, and through using the data *reduction* and *display* technique, the researcher did not notice any cross-reference to either terminology in both documents.

As reported several times in previous sections of this study, both the literature and quantitative data help indicate how an HEI can be viewed and categorised in terms of risk maturity. The data from the risk-maturity-based survey items (Q18 to Q34) in particular, which were directed to a number of respondents from HEI 3 among other respondents from different HEIs, provided evidence regarding how the selected respondents of HEI 3 administrators and faculty members view the ERM maturity of their ERM programme at their institutions. Their views and perception of the lack of ERM maturity validates the findings of the researcher under this theme, where risk management and institutional effectiveness need to be combined together as two functions. At least, as one respondent stated, one function should serve as a process that leads to the other. In addition, comparing the evidence from the literature specific to the maturity of ERM implementation at UAE HEIs with the quantitative and document analysis findings offered the researcher the ability to identify gaps in risk management processes, such as the one identified under this theme.

- ***Theme 12****: In the context or ERM implementation, both the Risk Management and Institutional Effectiveness policies are simplistic and require elaboration.*

The whole Risk Management Policy does not define risk management as a function or process that needs to be integrated into other processes within the institution. The definition of and reference to risk management is made so simplistically that it leaves the responsibilities of risk identification and management to the heads of faculties with no clear mentioning of a strategy to record, report and mitigate those risks. A major finding under this theme shows that this policy requires basic elements of the ERM process required for organisational SIL and SPA by the CAA *Standards*, as well as for the requirements of institutional effectiveness and QA functions. Additionally, under this theme, another major aspect of this policy is identified where it assigns the responsibility of "the maintenance of the risk register, regular evaluation of the areas listed in the risk register and reporting on risk to the Audit Committee and the University Council" (p. 2) to the Registrar and Chief Administrative Officer. This would apparently have both advantages and disadvantages for the risk management process, and therefore to the enhancement of HEI 3's risk maturity level.

iii) Summary

Analysis of HEI 3's available risk management-related documents showed a clear absence of interrelatedness between the major concepts defended by the researcher under this study, that is, ERM, risk management, institutional effectiveness and QA. In all cases, the Institutional Effectiveness document makes clear reference to QA under its "*Structures*" section. The document defines exactly how the QA process must be implemented and executed, as well as defining who is responsible for each step. However, the Risk Management Policy does not make a reference to QA being one of the integrated processes in ERM, or one of the potential outcomes.

One of the affected parameters of the Institutional Effectiveness QA process is "Accreditation activities". However, the risk-based approach mandated by the CAA *Standards* for SIL, and SPA is not reflected in this QA process, and therefore no clear link can be made by the researcher between ERM or risk management implementation on the one hand, and QA and institutional effectiveness on the other. As concluded in the previous HEI 1 document analysis, the researcher investigated this gap in the interview questions, and when presenting and recommending a set of enhanced guidelines for ERM implementation in UAE HEIs. Some of the themes emerging from this HEI document analysis, as well as the others, will be revisited and analysed more comprehensively in the interview data analysis.

4.3.6 Building a More Effective ERM Framework in UAE HEIs

4.3.6.1 Introduction to the Interview Findings

This section represents the second phase of the qualitative data analysis adopted by the researcher. It presents the findings from the semi-structured interviews, focusing on key themes by way of answering RQ3:

What are academic administrators' and faculty members' recommendations for a set of workable guidelines to help build a more effective ERM framework?

Since the researcher adopted the mixed-method study design, the interview questions were designed by way of answering not only RQ3, but also the other research questions. At the same time, and as stated earlier, answering any of the three major research questions will achieve not only one but rather all of the objectives of the study. Exploring the academic administrators' and faculty members' responses on the implemented ERM practices in UAE HEIs through interviews helped the researcher achieve all of the objectives of the study:

1. *Investigating the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs;*

2. *Exploring the current status of ERM policies and practices in UAE HEIs; and*
3. *Proposing a set of workable guidelines for more effective ERM framework for UAE HEIs in relation to effective ERM implementation in the UAE higher education context.*

To better achieve the main aim and objectives of the study, some of the interview questions (Q1 to Q3) were revised and modified slightly throughout the process of the quantitative data collection and analysis, where some of the perceptions of the academic administrators and faculty members of ERM effectiveness in their HEIs began to emerge. For example, Interview Q1 "What quality assurance (QA) or risk management approach is adopted in your institution?" was changed from "What risk management policy is adopted in your institution?" Some of the quantitative phase answers indicated the absence of clear risk management policies in some HEIs and for that reason the question was modified to include "quality assurance" as a more general concept that is guaranteed to be used by the selected HEIs in the UAE. The same applies for Interview Q2 and Q3 where QA was added as a general and guaranteed corporate concept. However, the answers to the interview questions specifically aided the discussion of the findings related to RQ3. In a sense, this section covers the results of the semi-structured interviews conducted by the researcher with five major respondents conveniently and yet purposefully chosen from the selected UAE HEIs based on the criteria set out in the Methodology chapter.

The semi-structured interviews conducted by the researcher targeted five major or key respondents, referred to as the "Interview Participants", coded as *IP1*, *IP2*, *IP3*, *IP4* and *IP5*, and generally referred to as the *IPs*. These respondents, as stated in the Methodology chapter, were selected conveniently based on their areas of expertise and professional tasks in relation to ERM (risk management and institutional effectiveness). Table 4.39 provides a brief profile description of the selected IPs.

Table 4.39 – IPs' Demographic Profiles

No.	***Institution***	***Participant***	***Qualification & Job Title***	***Public/Private***	***Experience***
1.	HEI 1	IP1	PhD in Engineering – Head of Academic Effectiveness	Private	18 years
2.	HEI 2	IP2	PhD in Education – Senior Manager (Institutional Research)	Public	7 years
3.	HEI 3	IP3	Bachelor of Arts in Executive MBA (Head of Quality, Health, Safety and Environment (QHSE) and Integrated Management Systems)	Public	10 years
4.	HEI 4	IP4	PhD in Business Management – Head of Administration	Private	15 years

5.	HEI 5	IP5	PhD in Quality Assurance, Business Management (BM) – Head of Quality Assurance and Academic Effectiveness	Private	12 years

The design of the questions for the semi-structured interview was opted for in order to enable the researcher to elaborate on and refine the responses more expressly. A consent form together with a detailed interview schedule were sent to the respondents by email for them to read and sign. Some interviews included an elaborated consent form completed digitally during the interviews, where the respondents recorded their consent to answer the questions already shared by the researcher. Several methods were used by the researcher to capture the responses, which included web-based video and audio meeting applications (Zoom and Microsoft Teams), digital recording using mobile phone recording features, and note-taking, which were all used to save the responses in their full length for the interactive data analysis model of coding and subsequent analysis. Later, the researcher made use of the NVivo application software (Version 12) to keep track of all the transcripts and responses, summarise them and put them in diagrams and tables based on different categories of codes. Colour-coded charts and visual aids such as NVivo generated Tree-maps, Sunbursts and Word Clouds (See Figures 4.10 to 4.13) were also employed by the researcher with the aid of NVivo to provide a visually clear representation of the themes and the sub-themes that emerged from the interview coding data analysis. Eventually, the researcher grouped all the themes into major categories in a table and highlighted the important quotes around them in terms of the emerging themes. For each Interview, the researcher fed different entries to the NVivo coding based on the major themes of each of the ten interview questions.

The following Figures are examples of Tree-maps and Word Clouds of the major ten codes elicited from the transcript of IP1 of HEI 1:

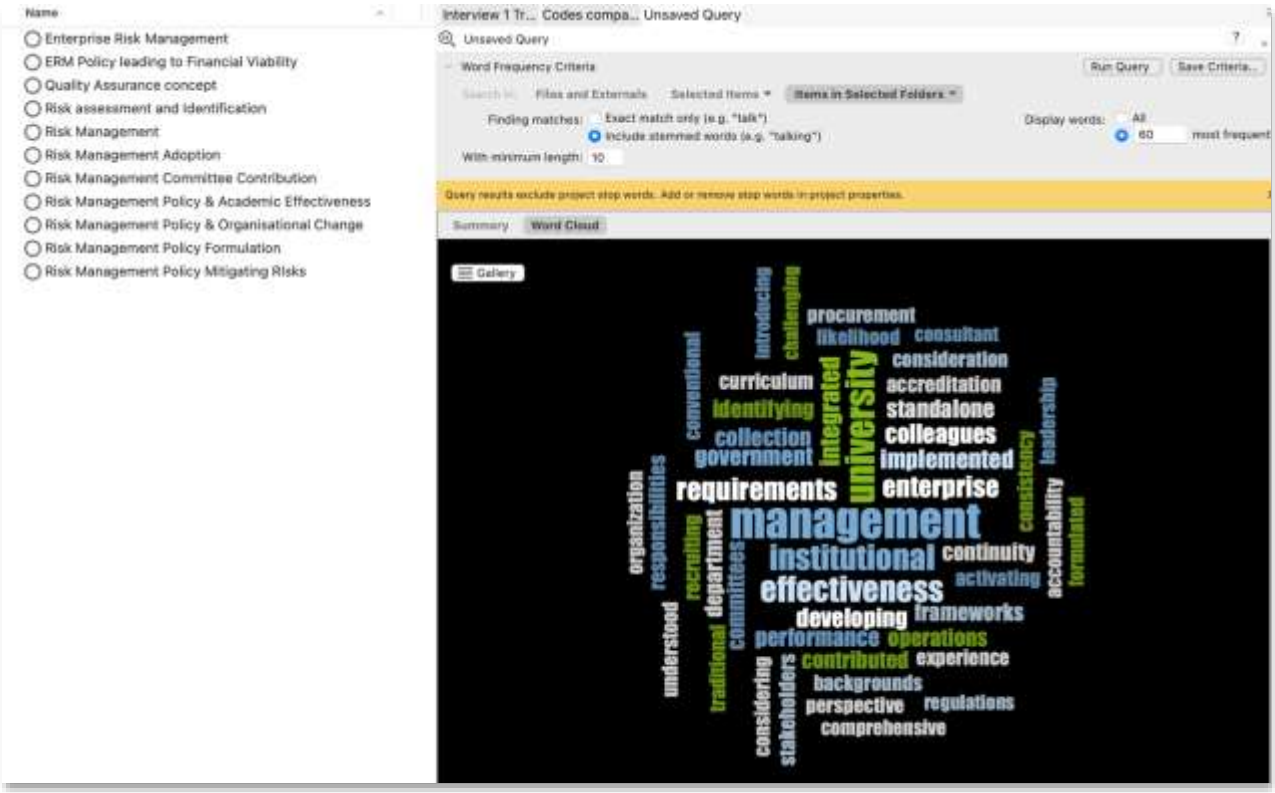


Figure 4.10 – Screenshot from NVivo Coding Exercise of IP1 Interview Transcript

Figure 4.11 – NVivo Tree-map Representation of IP1 Interview Codes

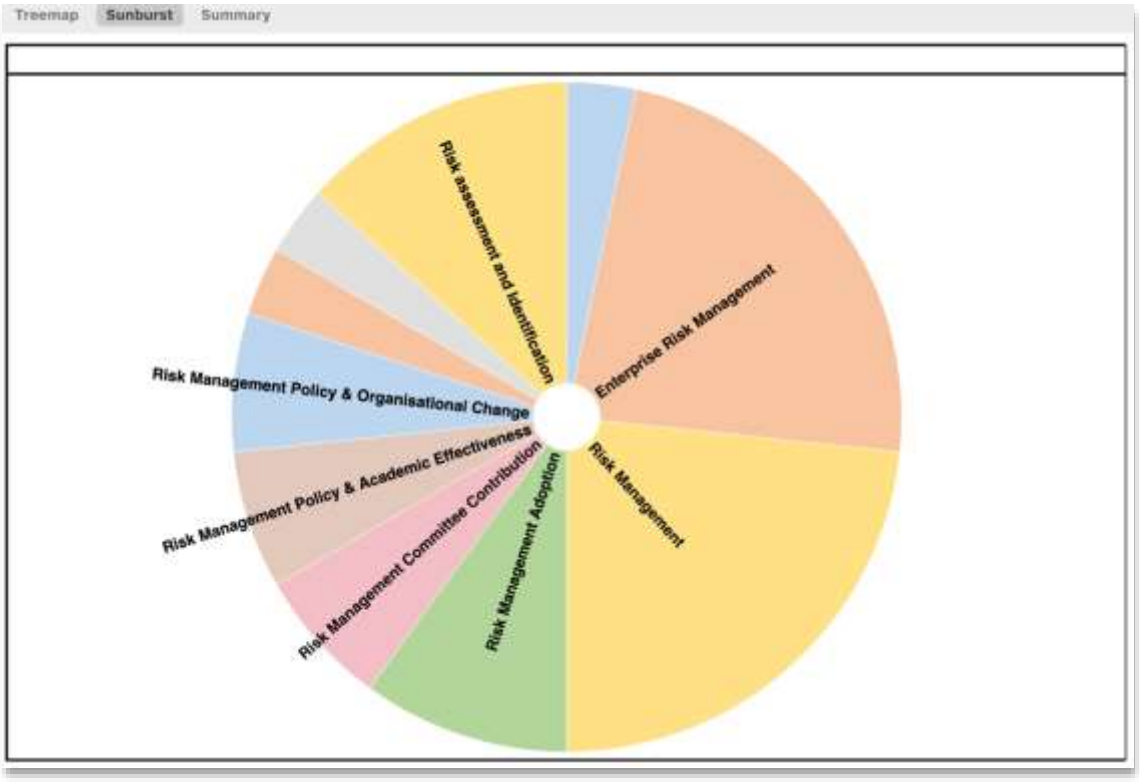


Figure 4.12 – NVivo Sunburst Representation of IP1 Interview Codes

Figure 4.13 – NVivo Word Cloud Representation of IP1 Interview Codes

As shown in Figure 4.10 to Figure 4.13, certain NVivo visual aids were employed by the researcher to provide a visually clear representation of the themes and the sub-themes that emerged from the interview coding data analysis. Since the major qualitative data analysis technique adopted by the researcher is the *interactive model*, one of the three major steps to be conducted for reaching "data conclusion drawing and verification" is "data display" (Miles & Huberman 1984, 1992, 1994). Therefore, the researcher grouped all the major themes into major codes and categories for each interview transcript which eventually helped visualise the emerging themes. The example given in Figures 4.10 from Interview 1 coding process shows that the emerging themes were based on 11 major coding entries derived from and based on the content of each of the Interview questions. Additionally, Figure 4.12, representing the NVivo Sunburst Representation of IP1 interview Codes, visually show the size of areas taken by each of the major codes, with "Risk Management", "Enterprise Risk Management", "Risk Management Adoption" and "Risk Assessment and Identification" taking the biggest portion of the representation. This representation helped the researcher derive Themes from the Interview transcripts in a more systematic way by use of the "data display" element embedded in the interactive model of qualitative data analysis. Theme 1 of the Interviews analysis, for example states that "The majority of HEIs in this study refer to their major QA practice as simply "Risk Management" rather than "ERM". This is supported by Figure 4.12 where the area taken by "Risk Management" is bigger than the one taken by "Enterprise Risk Management".

Therefore, by following the interactive model of qualitative data analysis (Miles & Huberman 1984, 1992, 1994; Miles, Huberman & Saldaña 2014), the researcher followed definitive steps in presenting the interview data collected from the IPs. In the first step, the researcher reduced the amount of obtained data from the answers of the ten (n= 10) questions and excluded invalid and irrelevant responses (data reduction). In doing so, the researcher organised the collected responses in categories from all academic administrators and faculty members by way of extracting the main ideas resulting from the interview sessions. In addition, the researcher presented the findings in a form of codes and themes by using the process of data display. In this step, the results obtained from the academic administrators and faculty members were coded and recoded in specific categories, each in accordance with its relevant interview question. In doing so, the researcher generated appropriate themes from the various participants' responses. These themes obtained from this process of data analysis are presented in relation to their related interview questions as they describe the main ideas agreed on by most of the IPs.

A summary of the emerging themes and major findings of the interview data analysis is presented in Table 4.38.

4.3.6.2 Adopted QA and Risk Management Approaches

Interview Question One*: What quality assurance (QA) or risk management approach is adopted in your institution?* The answers of the IPs to this question were intended to achieve the study objectives of exploring the current status of ERM policies and practices in UAE HEIs and proposing a set of workable guidelines for more effective ERM strategies for HEIs.

Theme 1: The majority of HEIs in this study refer to their major QA practice as simply "Risk Management" rather than "ERM".

The majority of respondents in both the quantitative and qualitative phases of the study agreed that ERM is used by several HEIs in the UAE, but there was still a consensus of caution about its usage and application. This proves itself to be one of the major findings of this study. In response to interview question one, IP1, IP4 and IP5, all representing the private HEIs selected by the researcher for this study, agreed that the term "risk management" is used to refer to the QA policy employed in their institution, rather than the term "ERM". IP1 provided a general picture of what QA exercise is actually practised at the institution, stating that:

… at our HEI, the most evident form of quality assurance approach being adopted is risk management.

However, the institution is yet to start the development of an elaborated and more advanced form of risk management, or what can be later elaborated on to be called an ERM framework. This practice is part of the "business continuity" process and not necessarily part of the QA function. IP1 added that on the one hand, the methodology or approach used at the institution for risk management is part of the common or well-known methodologies adopted by corporations and other organisations, such as COSO 2017 and ISO 31000. These are the frameworks that are being currently considered at the institution for risk management implementation.

However, on the other hand, regarding quality assurance practice, our institution uses the academic logical matrix framework, which is the normal practice through which the institution analyses the input processes, the outputs and outcomes at different levels within the organisation in an attempt to link and engage strategic and operational-related functions. (IP1)

However, on the other hand, since IP2 and IP3 represent federal public institutions, they confirmed that there are several levels of QA representation and talking about whether risk management or ERM is the evident form of such representation is never simple. Although ERM does exist as a policy and framework,

the clearly existing functional department for actual QA implementation is referred to as "Risk Management" rather than "ERM". Additionally, there are different requirements for the qualifications of academic QA. According to both IP2 and IP3, risk management rather than ERM is one component of those QA requirements, but it is a major and indispensable one. They both agreed that a lot needs to be done in order to reach the level of ERM framework integration into all the different functions across their institutions, for example:

This is a holistic approach which really governs the strategy and operations of our institution. It governs the operations and quality assurance framework. To abide by that, we started internally developing the risk register, for example, for all the operations happening and run on a daily basis, and then on a weekly and then monthly basis and so on. We established also another department and this department is called Risk Management, through which we also adopted a framework for all highlighted risks within each and every department within the organisation. (IP2)

IP3 exhibited a somewhat limited understanding or awareness of ERM as a term referring to QA at the public institution he represents. However, he confirmed the understanding of IP2 that the clearest component of a QA system is represented by the risk management function, but his answers were mostly influenced by the tasks and assignments of the department he represents:

For quality assurance, we are mainly following the OSHAD standards, or the Abu Dhabi Occupational Safety & Health Center standards, what is known as OSHAD. Okay, you may have heard about it; it is about occupational health and safety. There are also the ISO 14001 standards for environmental management systems and OHSAS 18001, and we are now migrating to the latest ISO standards, that is ISO 45001 for occupational health and safety. (IP3)

Both IP2 and IP3 argue that among all other universities in the UAE, the federal public institutions they represent have the clearest and best risk management model, which caters for all components of the QA system and helps the institutions comply with all local and international QA requirements.

Theme 2: Risk Management implementation is embedded in the management process of top-down decision-making.

Almost all the IPs agreed that risk management is the natural outcome of top-down decision-making. This finding is also verified by the results of the quantitative survey data, where 55.56% of the survey respondents agreed that risk management implementation is the outcome of top-down senior

management decision-making. IP1 confirmed that the risk management model adopted at the institution is typical of a high-level decision-making function. It is mandated by the senior management body represented by the Chancellor and the Board of Trustees. IP2 and IP5 agreed with IP1 in stating clearly that the intention and decision to implement risk management in HEIs is always conducted at the most senior level. The approach and mechanism of its implementation, however, comes at the lower level of doers and action players, such as risk officers, risk administrators, auditors and members of the finance team.

IP2 and IP3 also agreed that, unlike academic and research activities, the risk management policy came as a result of a decision made by the senior management, represented by the board of trustees, the vice chancellor or senior staff of their level, as well as the heads of administration and their teams.

Theme 3: QA and Risk Management are approached differently and interdependently in the majority of UAE HEIs.

IP1, IP4 and IP5 agreed that QA and the risk management process in their institutions are handled differently by two different departments. However, in terms of the tasks, assignments and roles of the QA as a major function in the institution, QA comes as the umbrella that includes risk management practice as one of its crucial defining elements.

Quality assurance is …. mostly related to strategic and operational functions. So, this is from the quality assurance perspective, but for the ERM as I explained to you, we are specifically using now the COSO 2017 and ISO 31000 guidelines. (IP1)

In our institution, I know about quality assurance as a general system which requires certain criteria to be met, like policies and regulations mandated by the Ministry of Education which need to be implemented and taken care of. However, for risk management as far as I know, it is a different department and the tasks of its employees mostly focus on auditing exercises as well as health-, safety- and environment-related issues. Their job also is to make sure the institution meets the CAA Standards for accreditation and licensing purposes. (IP4)

This understanding was also confirmed by IP3 who represents one of the public universities in the UAE:

Normally quality assurance and risk management are not one and the same thing. They are two different departments … Our risk management department is focusing on risks related to environment, health and safety management system and with other risks associated with different aspects of the institution. Quality assurance is a more general and bigger concept than that.

IP2 stated that it is his belief that all public institutions in the UAE exhibit a unified approach to QA versus risk management. According to him, all public institutions apply QA to all their academic programmes, as well as corporate functions and departments. However, when it comes to risk management or ERM, it is approached as the minimum requirement to meet the national and international QA frameworks. Risk management is only one component, as is the case with health and safety, of the overall QA system:

The minimum requirements my institution had adopted is the national quality assurance frameworks adopted by CAA, or adopted by the government, such as the government Excellence Framework and adopted by some requirements for international accreditation. Then we started to add in looking into, for example, health and safety. We adopted ROSPA framework, and now we may be the first institution in the region to even have won the award. (IP2)

IP2 gave a very good example of how through keeping up with the employability ranking agencies, his institution invested in the QA system at large as an independent system from risk management. Almost all the IPs, and especially IP2 and IP3, agreed that the risk management function is owned by the risk management department, which has its own register and interdependent existence.

4.3.6.3 Understanding and Defining ERM as a QA Concept

Interview Question Two*: What is your understanding of the existence of ERM (or risk management) as a QA concept in your institution?* The answers of the IPs to this question were intended to achieve the study objectives of investigating the perceptions of faculty members and ERM administrators of the ERM implementation in their HEIs, as well as exploring the current status of ERM policies and practices in UAE HEIs.

Theme 4: Unlike UAE public HEIs, the majority of private HEIs in the UAE do not exhibit a high level of maturity in their implementation of ERM policy.

All IPs confirmed the fact that HEIs in the UAE do not demonstrate a highly maturity level of risk management implementation that can be considered equal or even close to fully integrated ERM. This theme confirms the findings of the quantitative data, where it was concluded by the researcher that the

majority of the selected UAE HEIs have not yet attained an advanced level of maturity in terms of ERM implementation and integration. When asked about whether ERM is ever used as a term that applies to the QA function, all IPs concurred that the term comes either under or alongside the QA concept. On the other hand, IP1 and IP4, representing two of the prominent private universities in the UAE, posited that the level of risk management awareness among faculty members and administrators is far from being mature. IP1 confirmed that ERM does not exist as a clearly defined concept, whether it should fall under QA or under any other function at the institution. However, IP1 as well as IP4 confirmed that the risk management framework does exist, and that it initially originated as a concept and function through collaborative work of the internal audit department. IP1 added that:

*... the team in this department built a simplistic risk register for the institution and did not actually follow the conventional or traditional way of developing what is called risk appetite or RACI Matrix (a chart which defines roles for specific projects, standing for **R**esponsible, **A**ccountable, **C**onsulted, **I**nformed), etc.*

In a sense, risk management was traditionally developed through a risk register identifying a list of risks and covering all departments across the institution from an auditing perspective. The audit team then put certain controls to mitigate the identified risks. IP1 confirmed that no form of advanced ERM implementation and integration is identified at the institution, although it was mentioned by IP1 that the institution is making an attempt to establish a form of ERM across campuses by way of responding to the audit committee requirements, as well as to the MoE requirements. However, this exercise, although useful, has not been clearly implemented yet within the boundaries of QA.

In terms of maturity, IP1 added that necessary data are being collected at the institution for risk management purposes to ensure that proper controls are in place. In order to achieve the required risk management maturity, IP1 argues that the institution needs to develop a more robust framework that covers all the different areas related to risk management and defines the risk stakeholders' responsibilities, including risk appetite, risk tolerance and risk mitigation procedures. All these factors and elements of the exercise are already in the pipeline to be developed. IP1 stated that one challenge that people in the academic environment face is that this type of QA culture is not yet known or even appreciated by academics. The cultures of strategic planning, business continuity and risk management have not yet been the priority for the academic administrators. IP4 made a very brief statement that matches the answer given by IP1, suggesting that his institution is yet to integrate the risk management policy and process into the larger framework of QA.

On the other hand, IP2 and IP3, representing two of the major public universities in the UAE, confirmed that ERM does exist within the QA general framework, but that it is looked at as only one component of the overall QA system, which is in turn a major component of the whole academic system:

Therefore, this requirement will make me look into the quality assurance as a very important component in the higher education perspective. Now how to meet that one is the reason why it was governed by the UAE government and internationally by accreditation agencies or quality assurance agencies. (IP2)

... So, the minimum requirements my institution had adopted is the national quality assurance frameworks adopted by CAA, or adopted by the government, such as the government Excellence Framework and adopted by some requirements for international accreditation. Then we started to add in looking into, for example, health and safety. (IP2)

Theme 5: Risk Management practices can be different or independent from advanced and sophisticated enterprise QA practices such as ERM.

IP1 stated that the new *Standards* of the accrediting body in the UAE (i.e., the CAA) have already introduced a new assessment approach called the "risk-based assessment framework". However, this assessment does not exactly represent an ERM framework. A risk-based approach for accreditation and assessment does exist, but it does not exist in the name of "ERM*",* and it is not integrated into any of the QA controls or functions across the departments of the institution. According to IP1, the methodology that needs to be adopted for ERM in order to achieve the desired QA objectives is completely different from the risk management approach already adopted by the institution. IP1 added that new items and components have been identified to define and evaluate risks:

Based on these items, the institution is provided a score on the basis of high confidence or low confidence criteria. However, this is a completely different approach and exercise from the conventional ERM. Academic administrators, and stakeholders in general, are advised to avoid mixing between these two concepts.

According to IP2, the risk management practices adopted at his institution are indeed different from the more sophisticated ERM practices, in the sense that they intend only to meet the national and international requirements of accreditation. However, continuous efforts are being applied by the academic and

administrative staff to align all risk management practices to the advanced level of ERM, and the institution has shown great success in this context, as reported by IP2:

After meeting the minimum requirements of quality assurance and risk management such as ISO, COSO, CHEA, QAA, CAA, ROSPA, etc., we try now to go beyond the national and international requirements. At the same time, we are looking at how to ensure that this quality assurance and risk management process enhancement will be continuing.

This is Number 1. Number 2 is how it is really aligned with everything in the institution and how it is benchmarked as a more sophisticated and advanced quality assurance framework.

The answers of IP1, IP2 and IP3 to this interview question were almost identical when considering this theme. According to them, ERM is an advanced and more elaborate form of the QA exercise where all elements of the corporate governance integrate to achieve the strategic objectives of the institution. The findings of the interviews show that this concept has still not found its way to the corporate bodies of all UAE HEIs:

Coming up with a better framework of risk management and therefore a better and more advanced form of quality assurance, is what really keeps us awake in the night. It is not only to maintain the same quality assurance, but to make sure that, for example, we are meeting the standards of international ranking agencies. That is another quality assurance system in terms of ranking the higher education institutions worldwide. So, how to keep us on the top of the ladder is what really matters. (IP2)

4.3.6.4 Defining the Form of Existing Risk Management Policy

Interview Question Three: *What form of existing policy does your institution have for risk management implementation or QA achievement?* The answers of the IPs to this question were intended to achieve the study objectives of exploring the current status of ERM policies and practices in UAE HEIs, as well as proposing a set of workable guidelines for more effective ERM strategies for HEIs in relation to effective ERM implementation in the UAE higher education context.

Theme 6: A form of independent standalone risk management policy is necessary to meet the basic requirements of the QA function of academic institutions.

In general, despite the different answers provided by the IPs to this question, all agreed that no matter what, some form of risk management policy must be adopted by all academic institutions, each for their

own justifications and reasons. Similarly, all IPs agreed that academic stakeholders can always talk about a policy that covers either risk management, ERM or QA, and not necessarily all of them. IP1 confirmed that at the HEI he works in there is no detailed and definitive policy for ERM yet, although there is a detailed policy for risk management, as the findings of the document analysis phase also show. However, a policy for ERM still needs to be developed that not only identifies risks but also addresses ERM integration into other academic processes and functions:

There is a policy for ERM which needs to be developed. It is there; however, it comes at a quite high level, and it is not detailed. It is not addressing the details of the exercise at all … Yes, it is introduced in the sense of having a high-level committee to look after the risks and identify them and take actions accordingly, and that's it. But it's quite a high-level policy. (IP1)

IP2 confirmed that a clear form of risk management policy does not only exist, but that it also contributes to the achievement of all QA functions:

It is an independent policy, and the owner of this policy is the Risk Management Department within the institution. To elaborate on this point, the main function for this department is to assess the risks in the institution and then develop what we call the risk registrar, where we keep all these risks and then propose action plans to mitigate those risks and to try not only to mitigate them but also to find the right solutions, and sometimes we try to benchmark the level of the risk to help the quality assurance system overcome its setbacks.

As with most of their answers, IP3 and IP5 showed a very simplistic understanding of the role and function of the risk management policy in terms of its existence within only one component of the overall QA system at the institution, that is, risk monitoring and assessment. IP3 viewed the policy as applying mainly to areas such as health, safety, and environment. Therefore, it is only one side of the risk management process, but at least it is there:

As I said, risk management framework is the backbone of our health and safety system. It is one of the defining elements of our management system … See, it is not enterprise risk management. As I said, you can say at our corporate level, we may be having enterprise risk management, but one branch is Occupational Health and Safety or Environmental Safety Management System. (IP3)

Similarly, IP4 and IP5 stated that a risk management policy does exist in their institutions. However, similar to the majority of private HEIs in the UAE, the policies being adopted by these institutions are

quite simplistic and require a lot of elaboration and enhancement in order to fit into their overall QA system.

Risk assessment is done routinely and through ticking the boxes, but at least it is the meeting [of] the minimum requirement for accreditation and ranking purposes. It is a response to the MoE mandate through CAA and I do not see other justification or value for its existence. (IP5)

4.3.6.5 Understanding the Method of Risk Management Policy Formation

Interview Question Four*: What were the actions taken by your institution when the risk management or the quality assurance policy was formulated?* The answers of the IPs to this question were intended to achieve the study objectives of exploring the current status of ERM policies and practices in UAE HEIs, as well as proposing a set of workable guidelines for more effective ERM strategies for HEIs.

Theme 7: Top-down rather than bottom-up senior decision-making is always part of the risk management policy formulation action.

By asking Interview Question Four, the researcher aimed to obtain the participants' awareness of the actions taken by their institutions when the risk management policies were formulated. The majority of the IPs responded with their awareness of a committee being formulated through a senior management or board decision to develop and implement a risk management policy. Two IPs (IP1 and IP2) responded that the decision was made by the senior management or board, but that the action committee was formulated by the QA office or the risk management office in their respective institutions. This was identified by the researcher through the different responses of the IPs and emphasises the concept of top-down corporate governance in UAE HEIs supported by Warner and Burton (2017), as detailed in the Literature Review chapter. All the IPs agreed that no matter what mechanism or action is taken by an academic institution to formulate and implement a risk management policy, the decision is always made in a top-down structural order. For example:

I was not actually part of this exercise. It happened before my time. However, the exercise of the risk management policy development was similar to other policy development actions across the university. There was sort of a custodian appointed by the board who developed the policy. Actually, it was not even a team. We had somebody who was a consultant working in Khalifa University. He is one of our faculty members who developed the policy based on directions from senior management. (IP1)

One of the observations came basically from the Prime Minister's Office [a] long time ago, and this came where you have to align your practices, your operations, and your strategy with the Prime Minister's vision, mission and strategy, as well as with the country nationwide strategy, and then you try to benchmark yourself. This was highlighted as one of the gaps at that time. (IP2)

Theme 8: Risk management policy formulation action is usually a response to government-mandated regulations.

Through the document analysis section of this study, the researcher concluded that the most important action incentive for developing risk management policies in the selected UAE HEIs is to fulfil government-mandated regulations, and more specifically those of the MoE. The introduction of the CAA risk-based approach to the most important standards (SIL and SPA) provided a very important reason for HEIs to evidence risk management implementation through at least a clear form of existing policy. IP1 mentioned that his institution elected a consultant who conducted different meetings with certain units across the university, in order to develop different policies. The risk management policy he built basically and mainly came as a response to the government requirements and regulations. More specifically, it came as a direct response to the MoE's CAA accreditation and licensure requirements.

IP2 confirmed that the mandate to formulate and establish a risk management policy in academic institutions originated from the top federal authorities in the country, namely from the Prime Minister's Office. This came as a response to the need and requirement of academic institutions to align their practices, their operations, and their strategies with the Prime Minister's vision, mission and strategy, as well as with the country's nationwide strategy. The senior government mandate at that time stipulated that all academic institutions must benchmark themselves, since there were several functional and structural gaps in each of the accredited academic institutions at that time, which were highlighted by the government.

Within the internal auditing department, they started to define that one of the components was related to risk management, and that was the time where the policy was developed in consultation with internal and external stakeholders as a response to a government mandate ... Yes, there was a consultation conducted both internally and externally to develop that policy when the department was established and start doing its mandate. (IP2)

IP3 stated that all risk management exercises in the institution came as a response to federal-mandated regulations, whether from the MoE or other federal entities. According to him, meeting those federally

mandated requirements falls within a process of "continual improvement", which highlights the risk management framework implementation process:

It is federally mandated; however, since it is a continual improvement process, we improved our own. We have set up our own team comprising of 15 individuals or health and safety professionals from all campuses who are experts and having different type of expertise for monitoring and implementing the policies. (IP3)

4.3.6.6 Contribution of Independent Risk Management Committee to Risk Management Policy Formation

Interview Question Five*: Could you please describe the risk management or quality assurance committee, and how it contributed to the formation and implementation of your ERM or risk management policy?* The answers of the IPs to this question were intended to achieve the study objectives of investigating the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs, as well as exploring the current status of ERM policies and practices in UAE HEIs.

Theme 9: For more effective risk management policy formation and implementation, a dedicated and independent risk management committee is a requirement.

It was identified through the responses of all the IPs that an independent and dedicated committee or team is a requirement for effective risk management policy formulation and implementation. IP1 stated that the team that was involved in making the policy at the institution was the audit team. However, IP1 emphasised the fact that it is important to make a borderline between the two functions: the audit and risk management:

Because it was formulated before I joined Khalifa University, I came to know later that the policy was done by the audit team which was supposed to take the lead of risk management. However, it was decided later that due to the conflict of interest that this function must be moved to the new department of institutional research, to avoid conflict of interest between the audit exercise and the essence and principles of risk management.

The majority of the IPs agreed that a dedicated ERM or risk management committee is still not the norm across UAE HEIs. At least two IPs expressed their confidence that assigning the risk management function to a dedicated team is in the pipeline of new projects being currently considered at their

respective institutions. IP1, IP4 and IP5 agreed that one of the major objectives of their institutions is to develop more detailed and comprehensive policies, most importantly for ERM and for business continuity.

However, for the quality assurance, yes, we lead this exercise through different committees, starting from [the] academic curriculum committee, policy committee, eLearning committee, etc., as well as other committees which would contribute at the end to form what we call the Academic Leadership Committee. (IP1)

From the perspective of QA, all the IPs agreed that a lot of efforts are being considered by their respective institutions in terms of the formation of committees responsible for different functions. However, the tasks of such committees are supposed to be different from the tasks of a committee dedicated to risk management. The majority of the IPs argue that risk management is now a new trend and a new framework that HEIs in the UAE are trying to adopt, implement and action.

IP2 and IP3 agreed that the risk committees chaired by the internal audit department of their respective institutions are responsible for not only maintaining the risk register of the institutions, but also for the right management and implementation of the whole risk management process. IP4 and IP5 tended to agree that there is very little awareness at their institutions of the existence of an independent dedicated committee in charge of the risk management or ERM implementation tasks. They only know about the internal audit and QA departments and argue that because of this lack of awareness among administrators and faculty members, their institutions need to do a lot more in order to achieve a good level of risk maturity.

4.3.6.7 The Role of Risk Management Policy in Risk Identification and Assessment

Interview Question Six: *In which way does your institution's ERM/Risk Management or QA policy help identify and assess risks?* The answers of the IPs to this question were intended to achieve the study objectives of exploring the current status of ERM policies and practices in UAE HEIs, as well as proposing a set of workable guidelines for more effective ERM strategies for HEIs.

Theme 10: A form of advanced ERM policy must exist in order to basically support the effective identification and assessment of risks.

Not all the IPs agreed on the theme resulting from this interview question. IP1 confirmed that at his institution the risk management policy has not yet helped much in the identification and assessment of

risks. Since at most of the IPs' institutions the risk management policy is not the advanced integrated ERM version of the policy, this comes as a major problem since it deprives the policy from justifying its essential and strategic existence and contribution to the whole risk management process. At the institution of IP1:

... the internal audit team did this exercise with the support of an external audit firm, but again, not a full fledge[d] exercise. It was only for identifying the risk register.

However, according to IP2, the risk management policy helped the institution in the identification of "*risks which may stop the institution from doing what it is doing or planning to do*". Since at the institution of IP2, an ERM policy exists, it helps all departments to identify and assess risks that may prohibit or restrict their movement in the implementation of certain policies and procedures. IP2 stated that the policy plays a major role in the identification and assessment of risks in a very effective manner, whereby once risks are documented in the risk register:

from that point, the policy helps the institution because the internal audit process does not stop there, it is a continuous process. Then, the team will be receiving lots of potential risks, which makes them always busy …

The resulting report is handed over to the risk committee, where they look into those potential risks and then try to study them well and document them in the risk register of the institution, as I said earlier.

In this sense, and according to IP2 and IP3, their risk management policy helps their institutions throughout the year because their internal audit process does not stop: "*It is a continuous process*" (IP2) under the oversight of the management team that will be continuously meeting with stakeholders within the institution to explore possible risks and for risks that do not appear in the internal auditing reports.

Theme 11: The formation of a standalone ERM policy is a requirement in case HEIs choose to achieve a proper implementation of the risk management process.

IP1 stressed the fact that it is a requirement by the Abu Dhabi Government to proceed with ERM and the business continuity, and to have a complete standalone framework for both of them. According to him, both are included as part of the general requirements and functions of the university. However, the university is still working on the inclusion of a complete standalone position and/or committee under the Institutional Effectiveness Department dedicated for ERM:

We are in the phase of recruiting someone to lead this exercise in order to support not in developing the framework yet, but rather in implementing the output and findings of the consultant company work which the institution has already sort of commissioned or awarded the project to. (IP1)

IP2 argues that since his institution has identified and implemented an independent ERM policy, it has achieved a better management system of quality, and therefore surpassed other universities in the UAE in terms of how risk management and implementation are achieved. This gives an indication to the fact that public universities in the UAE have shown a great deal of maturity in the way risk management is implemented and integrated:

To be honest, I have not come across what other institutions are currently doing, so I cannot answer on their behalf. But for the major ones that I just highlighted like ISO for health and safety, CHEA, ROSPA, and QAA and others, up to my understanding that it is only our institution that got all of these frameworks applied, and then became a member of them. (IP2)

... all the public universities are now accredited, or the programmes of public universities are now accredited at the national level. However, I don't think that all of them have achieved an international accreditation level like what our institution has done. (IP2)

4.3.6.8 The Role of Risk Management Policy in Risk Mitigation and Opportunity Creation

Interview Question Seven: *In which way has the adopted ERM/QA framework in your institution helped mitigate or control risks, and create opportunities?* The answers of the IPs to this question were intended to achieve the study objectives of investigating the perceptions of the faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs, as well as exploring the current status of ERM policies and practices in UAE HEIs, and finally proposing a set of workable guidelines for more effective ERM strategies for UAE HEIs.

Theme 12: An effective ERM framework must exist to help the institution not only to mitigate negative risks, but also to capture and create opportunities.

Generally, the themes emerging from all the IPs' answers to this question came in two different directions. Three of the IPs agreed that the risk management policy adopted in their institutions still lacks the basic components of effective risk management or ERM in order for such policy to be able to help in achieving its important objectives. The other two IPs, representing the public universities selected in this study, agreed that their ERM policy does address a full and comprehensive risk management process in

terms of not only mitigating risks, but also in creating opportunities. However, the devil always lies in the detail, and as such in the implementation. As agreed by the ERM researchers highlighted in the Literature Review chapter, risk and opportunities' identification is a standard and taken for granted process at commercial entities and enterprise firms. Academic institutions, on the other hand, still struggle to capture this concept due to a lack of understanding or appreciating its value.

To be honest with you, since the risk management policy was done by our colleagues in the audit team, they only focused on defining each unit's business and identifying their potential risks. They meant to help these units to define the risk controls and respond to them. But again, let me be very frank, this as we speak is still sort of a document that people respond to its requirements only. It is kind of ticking the boxes and a table to fill. It is still not being implemented effectively, despite the fact that the audit team has done this exercise twice at least and they came back to people to ensure that whatever sort of controls are there, they need to be put in place. (IP1)

IP1 argues that the absence of real risk management policy implementation must send an alarming signal to different business units and different stakeholders within the university, and specifically to the management, that there are a few actions that need to be taken in this regard. In other words, an effective risk management or ERM policy must be able to provide evidence of the right controls, and therefore the right actions, to mitigate potential risks and forecast convenient opportunities that contribute to the research, learning and academic processes at large.

IP2 and IP3 provided the most interesting examples from their respective institutions of how an effective risk management framework helps not only mitigate risks but also create opportunities. IP2 gave living and actual examples of how the ERM policy in his institution helped transform risks into opportunities. According to him, the ERM policy created so many opportunities, which made the executives of the institution revisit their strategic goals and key performance indicators.

Another example is online learning. It was highlighted almost 4 years ago in the risk register that we have the risk of not being able to deliver some courses fully online. When the COVID-19 pandemic struck, our institution was the first one to transform to online learning 100% overnight, and then what happened [was] the institution was recognised as the best higher education institution in the country that transitioned to online learning. Now, today, we had received so many awards internationally and nationally because we achieved 0-minute transformation process because at that time it was highlighted that some courses might not be delivered 100% online. (IP2)

I can give you an example of one of the risks which was identified during the COVID-19: the employability. This risk was highlighted as a risk and then they managed to overcome it and then they moved the employability up by 6% ... (IP3)

IP3 reversed the question by hypothetically asking what would happen if risk management were not done in a proper way. According to him, managing risks helps mitigate all kinds of losses and damages to the institution, whether they are financial, educational, reputational or otherwise:

There are three elements which call any institution to manage their risks in terms of health and safety: the moral, the legal and the financial. Moral means every institution has the moral responsibility to provide a safe workplace for all workers including contractors. Then comes the legal justification. As per law, every employer has the duty to provide a safe workplace for all his workers including contractors. Then we come to the financial. If there is an accident, there will be medical expenses, and there will be legal fines from the authorities, or there could be court cases, then the penalties, then the expenses … On the other hand, if you have a good health and safety culture and no accidents, then you will have a better reputation in the market. (IP3)

4.3.6.9 The Role of Risk Management Policy in the Enhancement of Financial Viability

Interview Question Eight: *How do you think the adopted ERM/QA framework policy in your institution has helped enhance the financial viability of your institution?* The answers of the IPs to this question were intended to achieve the study objectives of investigating the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs and proposing a set of workable guidelines for more effective ERM strategies for HEIs.

Theme 13: Effective ERM policy implementation will definitely lead to a better financial viability and reduce costs.

As stated in the Literature Review chapter, some researchers view ERM as mainly a financially driven concept. Martin and Power (2007) and Lundquist (2015, p. 44) argued that "ERM has less to do with managing risk and more to do with serving the professional interests of accountants and regulators". The COVID-19 epidemic taught people that cutting on costs is not always the solution for a better financial viability. A good deal of improved financial planning is owed to better risk management planning. IP1 argues that a good part of the ERM exercise touches on the financial viability of the institution:

This is an exercise done by our colleagues in the finance team because it is understood by them that it is sort of an audit exercise, and this gives it a little bit of more attention and value compared to the other units across the campus. You know they care about risk management more than any other department because they are sort of more familiar with the auditing exercises and frameworks, and how it is affecting their operations, and many of them are coming from corporate backgrounds.

This gives a hint that risk management exercises and frameworks must be part of the financial functions and operations. IP1 stated that due to the accountability that his institution and other institutions have before different auditing firms, finances are always required to ensure that all similar exercises are done at the same pace within the risk management framework:

So, I can claim based on my experience here and in another institutions that the finance team is the team that we would mostly take risk management implementation into consideration together, of course, with people in procurement and people who are working in areas which are more into business.

As agreed by most ERM researchers, risk management is an audit function that is quite related to financial terms, funds and money. IP2 argues that a good ERM policy would definitely help the institution's financial wellbeing to flourish, as well as to reduce extra and unwanted expenses. He gave the example of the "Accelerators" programme his institution is applying, where risks of financial bleeding are mitigated to save the institution millions of dirhams:

The Accelerators was one of the projects initiated by the Prime Minister's Office, where we were asked to accelerate some of our processes. Say, for example, the process of applying for a salary certificate or a deposit. In the past, it used to take like two weeks moving from one person to another and taking lots of papers, and now you can do it in one second. So, you can imagine this is one of 166 processes that had been accelerated in 100 days of work. These 166 processes that had been accelerated within the organisation during that time had [a] high level of financial impact. So, you can imagine the time spent and it was estimated basically to cost millions of dirhams for each process. (IP2)

IP3 argues that while talking about the financial viability as an outcome, risk assessment and risk management must be a proactive activity:

That means you are doing it before something can go wrong. So, suppose you are investing some money on some of the project, through the risk assessment you might prevent a big accident or avoid a

big loss to the institution. At the same time, as I said, reputation can also have its monetary value, because when you lose your reputation, this is going to affect your financial situation.

In summary, most IPs including IP4 and IP5 replied with "yes" when asked if they believe financial benefit may be the clearest outcome of effective ERM policy implementation. A few of them (IP2 and IP3) went further to give practical examples from their institutions of how a good risk management policy implementation helped them boost their financial health considerably.

4.3.6.10 The Role of the Risk Management Policy in the Creation of Organisational Change

Interview Question Nine: *How has the adopted ERM/QA framework policy in your institution helped create organisational change in your institution?* The answers of the IPs to this question were intended to achieve the study objectives of investigating the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs, as well as proposing a set of workable guidelines for more effective ERM strategies for HEIs.

Theme 14: If implemented effectively, ERM policy must lead to a form of positive organisational change in an academic institution.

Despite its confirmed positive impact on organisational change, as the ERM research and literature show, ERM implementation in UAE HEIs has not gone far enough to present that kind of considerable change. This is a statement concluded from the responses of all the IPs when asked this interview question. IP2 and IP3 gave interesting examples of how the ERM framework adopted in their institutions helped create some strain of institutional structural change. However, according to them, a lot more must be done in order to conceive a more solid form of organisational change. IP1, for example, stated clearly that:

… as we speak, it didn't lead to any changes. It only led to activating the framework and working on it, but to speak about changes, there have been no changes if we are talking about enterprise risk management specifically. However, if you are talking about quality assurance, of course a lot of changes happened at the organisational level.

IP1 added that since ERM and QA are still two different functions at his institution, as well as other institutions in the UAE, future planning must take into consideration the integration of both under one integrated framework. This is what ERM is all about.

On the other hand, IP2, IP3 and IP4 argue that ERM and risk management framework implementation definitely leads to some form of organisational change. IP2 gave the example of institutional structural change taking place as a direct result of the risk identification and mitigation process. Some very efficient and proactive departments and functions were added to the organisational chart of the institution by virtue of implementing the ERM process:

[The] Employability and Industry Engagement Department was not there before establishing or identifying the risks of being unemployed or the risk of not employing the students, or not trying to find them jobs ... the management here said that if we are just teaching the students, but we are unable to employ them, then we are not really making any good for the community. (IP2)

... So, our role is to educate and graduate individuals who are really fit easily into the job market in the future. Therefore, in order to do that, they established a dedicated department with a new mandate that was not there in the institution for years, which is called the Employability and Industry Engagement Department. (IP2)

Therefore, according to IP2, risks identified in a certain period of time will no longer remain risks if an ERM policy is implemented effectively with the aim of creating organisational change. The examples of departments created in the institution provided by IP2 came as a result of the risks identified by the internal audit five years previously. Such risk-based audit concluded that the institution was educating students who were not required for the job market. For that reason, measures were taken to mitigate that risk and ensure that the university graduates are required by the job market and can be practically employed.

IP3 agreed with IP2, but his understanding of organisational change is a bit different and more particular. He argues that the change ERM policy implementation brings about is more of a cultural change than a structural one:

When I started six years back, our students were going inside the engineering labs wearing their traditional dress, not wearing the cover coat or the lab uniform. We then implemented the motives and posted awareness videos, telling them if you are not wearing what can happen, or if you're not wearing, what health and safety issues can happen. So, gradually now no one enters without that dress. So, this is a cultural change. (IP3)

Therefore, according to IP2 and IP3 effective risk management implementation helped the institution change not only its organisational chart or structural identity, but it also helped in changing the behaviour and attitudes of staff and students. IP4 and IP5 gave similar examples of how the revised risk management policy in response to the COVID-19 pandemic helped his institution dramatically change much of its identity, which showed in every aspect of the staff and students' behaviour and attitudes.

Theme 15: QA, rather than ERM, is at the centre of organisational change at the university level.

All IPs agreed that most academics still argue that QA, rather than ERM or risk management in general, is at the centre of organisational change interest at the university level. The reason is that QA, rather than ERM, is defined as a function by looking after the performance of business units and the performance of academic units. By the same token, in UAE HEIs, when academics are asked about the accreditation exercise, for example, they will always make a reference to its relationship with QA rather than ERM. Therefore, in terms of academic accreditation, licensure or ranking as mandated by the CAA in its new version of the *Standards*, ERM still does not find its place as a major contributor to organisational change. However, IP1 did not neglect the fact that when implemented effectively, ERM could be an ideal way to effect certain forms of organisational change:

If you talk about the new Standards of the CAA, of course it is moving forward in helping to do some organisational or institutional changes …, not at the level of ERM but at the level [of] quality assurance. However, by introducing the new function of ERM in how we report the data, how we analyse them, it will actually help us at the Unit of IRP [Institutional Research and Planning] to sort of convince a little bit the different faculty members and academic administrators that these changes are required by the Ministry.

IP1 added a very interesting point when he stated that academic administrators or faculty members would be very reluctant to respond to a change request if it is not mandated or directed at a top-down decision level. It is quite challenging to convince academic administrators and faculty members that this change is recommended unless it is formalised through a specific form or risk management policy implementation.

However, IP2 agreed that the clearest form of organisational changes that happened at his institution was the result of the broader QA framework. According to him, that change affected all levels of the institution:

Our administration tries to ensure all aspects of change fall under the quality assurance function. By doing so, we pursued changes not only at the organisation level, but also at all different levels. I just gave you few examples that required a major change in the organisation structure by establishing a new quality assurance system.

To the support of this statement, IP3 and IP4 stated that it is not only risk management that contributes to the organisational and behavioural change at their institution, but also the need to cope with the requirements of the QA system.

4.3.6.11 The Role of the Risk Management Policy in Support of Institutional Effectiveness

Interview Question Ten: *How has the adopted ERM/QA framework policy in your institution helped create or support institutional effectiveness in the institution?* The answers of the IPs to this question were intended to achieve the study objectives of investigating the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs, as well as proposing a set of workable guidelines for more effective ERM strategies for HEIs.

Theme 16: If implemented effectively, ERM policy must lead to maintaining and supporting the institutional effectiveness of academic institutions.

The survey and interview findings show that institutional effectiveness is an essential aspect of the academic corporate governance in UAE HEIs. It is the ultimate organisational product that all HEIs aspire to achieve. The researcher based the conceptual framework of this study around the notion of institutional effectiveness being the ultimate outcome of the risk management process. Therefore, the researcher asked this question with the assumption that ERM must lead to institutional effectiveness. Otherwise, there would be no value in its implementation in the first place.

IP1 argues that speaking of the currently adopted policy of risk management in its present format, the answer to this question would be:

No, not yet. But the plan is yes it will, and it needs to do so. It will, because as I mentioned, the quality assurance policy contributed to the effectiveness of our institution, but the ERM as I explained it is in the pipeline, meaning that it will, based on our vision and strategic planning.

In this sense, it appears that ERM must be implemented as a policy and then fully integrated into the QA. IP1 agreed that if ERM is implemented as a policy effectively, it will definitely lead to institutional effectiveness because they both aim to achieve one objective in the end.

Conversely, IP2 strongly defended the notion of this theme when he stated that institutional effectiveness indeed comes as a result of proper risk management implementation. He stressed that he himself is chairing the Institutional Effectiveness Department, and confirmed the thought that:

There is basically a risk management framework, and this framework really looks into all the departments within the institution with the specific performance indicators, where some of them are monitored annually and some of them semi-annually, some of them are permanent, and so on.

At the end of the day, these indicators would always require from the owners of those functions to provide us with their action plans, or first of all an analysis of the trends: Why we see what we see … It should be like a series of three data points at minimum for that performance indicator in order for us to be able to judge that something is going up or down, or [remains] steady.

According to IP2, the documentation of key performance indicators results in effective action plans and new trends. The analysis of these new trends helps the institution establish a solid follow-up mechanism to investigate and report on what has been achieved from what has been proposed. This helps proactively in the support of the institutional effectiveness department:

Those action plans, as I said, and those trends are already saved in a document called "Institutional Effectiveness Report". I publish this document every year for the institution, and a copy of this one is always being provided to all government entities that are regulating our work, such as the Ministry of Education and then the Prime Minister's Office and other institutions that are regulating our work. (IP2)

IP3 and IP5 agreed that the risk management framework at their institution helps in boosting the institutional effectiveness of different functions across campus. However, according to them this is not being done in a clear manner:

There is over reliance on document analysis and reporting. However, what we need is a risk management documentation process which gives us an oversight analysis of the administrative and academic performance of the institution, and then how effective the processes have been over the past years, and then what the action plans are for the coming years. (IP5)

4.3.7 Summary of the Qualitative Semi-Structured Interview Data Results

Table 4.40 includes a summary of the major selected participants' interview answers, which represent their awareness and perceptions of the effectiveness of ERM framework implementation in their HEIs.

Table 4.40 – Summary of the Semi-Structured Interview Data Results

	Interview Question	***Summary of Results***
Q1	What quality assurance (QA) or risk management approach is adopted in your institution?	- The majority of HEIs in this study refer to their major QA practice as simply "risk management" rather than "ERM". - Risk Management implementation is embedded in the management process of top-down decision-making. - QA and Risk Management are approached differently and interdependently in the majority of UAE HEIs.
Q2	What is your understanding of the existence of ERM (or risk management) as a QA concept in your institution?	- Unlike UAE public HEIs, the majority of private HEIs in the UAE do not exhibit a high level of maturity in their implementation of ERM policy. - Risk Management practices can be different or independent from advanced and sophisticated enterprise QA practices such as ERM.
Q3	What form of existing policy does your institution have for risk management implementation or QA achievement?	- A form of independent standalone risk management policy is necessary to meet the basic requirements of the QA function of academic institutions.
Q4	What were the actions taken by your institution when the risk management or QA policy was being formulated?	- Top-down rather than bottom-up senior decision-making is always part of the risk management policy formulation action. - Risk management policy formulation action is usually a response to government-mandated regulations.
Q5	Could you please describe the risk management or QA committee, and how it contributed to the formation and implementation of your ERM or risk management policy?	- For more effective risk management policy formation and implementation, a dedicated and independent risk management committee is a requirement.
Q6	In which way does your institution's ERM/Risk Management/QA policy help identify and assess risks?	- A form of advanced ERM policy must exist in order to basically support the effective identification and assessment of risks. - The formation of a standalone ERM policy is a requirement in case HEIs choose to achieve a proper implementation of the risk management process.
Q7	In which way has the adopted ERM/QA framework in your institution helped mitigate or control risks, and create opportunities?	- An effective ERM framework must exist to help the institution not only to mitigate negative risks, but also to capture and create opportunities.

Q8	How do you think the adopted ERM/QA framework policy in your institution has helped enhance the financial viability of your institution?	- Effective ERM policy implementation will definitely lead to a better financial viability and reduce costs.
Q9	How has the adopted ERM/QA framework policy in your institution helped create organisational change in your institution?	- If implemented effectively, ERM policy must lead to a form of positive organisational change in an academic institution. - QA, rather than ERM, is at the centre of organisational change at the university level.
Q10	How has the adopted ERM/QA framework policy in your institution helped create or support institutional effectiveness in the institution?	- If implemented effectively, ERM policy must lead to maintaining and supporting the institutional effectiveness of academic institutions.

It essential to note that the data from the questionnaires and interviews provided some triangulation of evidence to achieve the research aim in a number of ways including providing detailed evidence from the interviews. An example of triangulated evidence is item 9 of the survey questionnaire that aimed at obtaining a description of the actual corresponding term used at the institution in terms of risk management and QA program implementation. This question is identical to Q1 of the Interview schedule. The data from both questions showed that risk management rather than ERM is the term mostly used by HEIs and that QA and ERM are not always necessarily integrated or interdependent functions in the academic environment. However, the answers of the questionnaire items did not provide a detailed analysis of, for example Q5 of the Interview, how the risk management committee is formulated and how does it contribute to the effective implementation of ERM framework in an institution. Similarly, the answers to the questionnaire items did not answer questions such as how and in which way, whereas the Interview answers did. For example, Q6 and Q7 of the Interview helped answer how the ERM framework helps the respective institutions identify and assess risks as well as in which way it helps in controlling and mitigating those risks. Item 38 of the survey questionnaire helps identify whether participants are aware or not of the fact that risk management help achieve academic effectiveness but does not afford to tell how. Q10 of the Interview does provide the answer to how the adopted ERM policy helps achieve institutional effectiveness.

4.4 Summary of the Results

This study focused on the perceptions surrounding the effectiveness of ERM implementation in UAE HEIs, based on survey data resulting from seven selected UAE universities and 101 participants. This explanatory study adopted a mixed-method approach to answer the research questions and achieve the study objectives of investigating the perceptions and awareness of faculty members and academic administrators regarding the effectiveness of ERM implementation at UAE HEIs. The researcher

conducted quantitative analysis of the data obtained through the survey and qualitative analysis of the data obtained through document analysis and interviews. By way of answering the major research question and achieving its main objective, the results of all phases of the study indicate in common an *acceptable* level of awareness among the major academic stakeholders, including the faculty members and administrators, towards the level and degree of maturity of the effectiveness of ERM adoption, implementation, and integration at their respective institutions. The results show that ERM is a more mature and advanced level of the risk management adoption concept, the value of which is still not appreciated in the higher education sector. With the earliest ERM programme being confirmed to have been adopted in 2011 and the earliest risk management adoption dating back to 2002, at least seventy-four (n= 74) CAA-accredited universities in the UAE are required today to exhibit a form of risk management or ERM adoption, implementation, and integration. Additionally, the findings of both the quantitative and qualitative phases of this study reveal that, when checked against proven measures of maturity testing, ERM in UAE HEIs is still in the "initial to moderate" stages of the maturity continuum.

There are many indications in the quantitative and qualitative data implying that ERM is receiving increasing attention by the senior management and boards of UAE HEIs. The results also show that the most noticeable incentive for ERM adoption and implementation is the requirement to respond to the educational authority's regulations and rules, and senior management directives. It is not clear through the results why the role of a Chief Risk Officer (CRO) is not recognised in all the selected universities, where the majority of the responses came in favour of an internal auditor or finance team taking care of the risk management responsibilities. It was also found by the researcher through the adopted ERM maturity level testing model that a lot of efforts are required to be exerted by the academic decision makers in to order to fully integrate ERM within other functions of higher education, and therefore achieve academic effectiveness. The researcher's qualitative results support the finding that the effective application and implementation of ERM establish and strengthen "effectiveness" and "QA" across all different academic functions and programmes. This finding specifically answers the second and third questions and corresponds to achieving the subordinate objectives defined in chapter 1. Through the document analysis and interviews, the researcher managed to obtain a full picture of the actual QA and ERM policies and frameworks being implemented in the selected HEIs. Through this phase, it was also concluded that the heads of academic effectiveness departments are the staff most appreciative of the need to fully integrate ERM into all academic functions and processes. They were the ones who strongly supported the fact that effective ERM implementation and integration definitely leads to better academic effectiveness on all levels. However, the data obtained from the administrator interviewees showed their

tendency to attach ERM to traditional risk management; health, safety, and environment; and auditing processes rather than academic effectiveness. The data collected from the document analysis and the answers of the interviewees in this phase helped the researcher achieve the final objective of proposing workable guidelines to help build a more effective ERM framework. These recommendations are presented in detail in the next chapter.

CHAPTER FIVE: DISCUSSION OF THE STUDY RESULTS

5.1 Introduction

This chapter presents a discussion of the key results of the study. Through the utilisation of a sequential mixed method study design, the researcher managed to answer the three research questions and meet the three corresponding objectives (See Table 1.1):

1. **RQ1**: What are the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs?
2. **RQ2**: What are the current ERM policies and practices in the UAE HEIs?
3. **RQ3**: What are academic administrators' and faculty members' recommendations for a set of workable guidelines to help build a more effective ERM framework?

The quantitative results that aimed at answering RQ1 and partially so for RQ2 and RQ3 gave direction to the data analysis and results of the qualitative section of the study by way of implementing triangulation. Additionally, the following discussion in this chapter shows how the results that correspond to one research question are supported by the data obtained from all the three phases of the study, i.e., from the survey questionnaire, the document analysis sand the interviews. It also shows how the results that are related to one research question can support answering and understanding the other questions and help address all objectives of the study. Therefore, the following discussion shows how the results can be integrated to reach better understanding of the major inquiry and to achieve triangulation of evidence.

5.2 Discussion of the Results

Where section 4.4 of the thesis provided for an overall synopsis of the results of the study, the following will account for a further discussion of these results. The researcher relied on an extensive literature review of studies conducted in the ERM field and used the explanatory mixed method of quantitative and qualitative data collection and analysis methods to reach numerous findings regarding the perceptions surrounding ERM policy and the effectiveness of ERM implementation at UAE HEIs. A discussion summary of the most important results of the study is presented in this section as follows.

5.2.1 Discussion of the Results of Research Question 1:

5.2.1.1 Perceptions of faculty members show that they do not entertain a strong tendency to understand or endorse ERM as an effective concept at the institution.

The claim that faculty members seem to be less interested in or even aware of the subject of ERM implementation was reflected in both the survey and interview studies. The statistical results of the survey

showed that 51.1% of administrators and only 33.3% of all faculty members are aware of ERM adoption at their respective institutions. It is also interesting how the following two statements were answered by the administrators versus faculty members: 1) "Administrators consider effective risk management as crucial for the achievement of their institution's expectations and QA objectives"; and 2) "Faculty members consider effective risk management as vital to the learning process and meeting essential academic objectives, and therefore contributing to the overall academic QA process". Almost 60.5% of the administrators agreed with the first statement while only 39% of faculty members agreed with the second one, and the rest either disagreed or skipped the question. The interviews gave very interesting results in this regard, indicating the fact that faculty members show less interest in recognising the significance of ERM in the academic field. The fact that administrators are more aware and interested is partially because most of them come from business backgrounds where it is the overall impression that ERM is only dedicated for the health and safety environment, and financial risks. This conclusion was particularly stressed by one administrator interviewee in one of the private institutions where he repeatedly emphasised the fact that the whole risk process at his institution is about these cited elements, rather than anything else. This suggests the requirement to educate faculty members and engage them in a better way in the ERM process if the decision makers are keen on fully and effectively integrating ERM with the academic governance of the institution. This will allow for a more profound understanding on the part of the faculty of the whole intent of ERM and engage them more strategically in managing and controlling institutional risks.

5.2.1.2 Regardless of the variables of "type of institution" and "role of participants", perceptions of participants showed that UAE HEIs exhibit *relative* similarities in ERM adoption, implementation, and integration elements.

Before the researcher started the data collection phase, the literature review and Conceptual Framework indicated that the various types of institutions in the UAE would suggest a clear variation in terms of ERM implementation. Even though the Conceptual Framework of this study suggests that there should be some variation in the decision of ERM adoption, as well as in the implementation process based on institutional type (including factors such as public vs. private, size and study programme concentrations), the quantitative and qualitative results did not entertain this understanding. The results of the interview phase showed a tendency on the side of the faculty member and administrator interviewees in public institutions to show full integration of ERM into all functions across their campuses. However, the quantitative results of the survey came to identify relative similarities between the public and private universities in the maturity level of ERM adoption, implementation, and integration. The fact that public

institutions in the UAE receive better supported funding, which is reflected in the quality level of their programmes, can hold true. However, other factors can serve to influence the effectiveness level of ERM implementation, such as the size of the campus, number of provided programmes, and quality of staff. Through the interviews, the participants from both public and private universities showed differences in terms of dedicating resources, hiring a specialised CRO, or investing in financial resources to support the ERM implementation exercise. For example, one interviewee from a large public institution with a proven ERM programme stated that they do not have a dedicated CRO and that the risk management practices are still handled by internal and external auditors.

5.2.1.3 Perceptions of participants show that due to the unique nature of HEIs, ERM is not fully integrated into all academic functions, but embedded into institutional corporate governance and decision-making processes.

As concluded by the researcher in the literature review, HEIs have several unique aspects that distinguish them from all other institutional bodies outside of academia. All the findings of the study commonly indicated that the endeavours by UAE HEIs to adopt, implement and integrate ERM are still lacking maturity and require a lot more efforts. The unique aspects that distinguish HEIs such as the fact that they are "mission-driven organizations with goal ambiguity, shared governance, and decentralized decision-making" impacts ERM adoption, implementation, and integration (Lindquist 2015, p. 125). The survey questionnaire items Q18–Q34 were designed by the researcher specifically to measure ERM maturity levels by asking the participants about their awareness of the level of ERM integration into corporate governance functions and decision-making processes. It is true that the survey results showed that 42.99% of all respondents "Agree", and 14.94% "Strongly Agree", with the full integration of ERM into the academic institutional corporate governance and decision-making processes, but it also means that there is a considerable score of respondents that either "Disagree" or replied neutrally by not confirming their awareness in this regard.

Therefore, the levels of ERM integration maturity in HEIs are measured by the degree of integrating risk management as a concept into top level decision-making and institutional corporate governance. However, the responses of the survey maturity testing questions indicated that both administrators and faculty members do not argue this is currently implemented at their HEIs in a mature manner. Similarly, all responses of the interview questions indicated that a more comprehensive approach of risk assessment, evaluation and mitigation still needs to be put in place across HEIs. One of the major themes obtained from the interview data analysis is that ERM is still not implemented effectively in the selected UAE

HEIs. If it is implemented effectively, the implementation and integration of ERM policy must lead to maintaining and supporting the institutional effectiveness of academic institutions. In other words, this conclusion supports the general understanding described in the literature of the uniqueness of HEIs and how they are different from the private and business corporate entities in terms of corporate governance and decision-making.

5.2.1.4 The selected UAE HEIs show "*moderately acceptable*" levels of "maturity" with regards to ERM implementation.

The results of the quantitative and qualitative data analyses revealed that the level of maturity of ERM implementation in UAE HEIs is still in transition and is indeed hard to measure. Measured against traditional maturity attributes through an RMM endorsed and adopted in ERM research, the researcher managed to define the maturity level through a questionnaire-based matrix. According to the survey results, ERM implementation in the UAE higher education is in the developing stages of ERM maturity. The results showed that the highest score of 42.3% of all responses suggested the second "*premature*" level on the maturity continuum for the first group of maturity testing questions. On the other hand, the highest score of 42.99% of responses of the second group of maturity rating questions was for the third "*mature*" level of maturity. This gives the impression that the UAE HEIs are in a transitional phase towards achieving the desired maturity level, where more corporate efforts need to be invested. However, the scores of maturity testing were in favour of the public universities more than the private ones. The interview data also suggested the finding that unlike UAE public HEIs, the majority of private HEIs in the UAE do not exhibit a high level of maturity in their implementation of ERM policy. Some interviewees attributed this difference between public and private universities in terms of ERM maturity to reasons of funding, corporate investment and more official attention paid to public universities.

5.2.2 Discussion of the Results of Research Questions 2 and 3:

Throughout the following discussion, the answers of RQ2 and RQ3 are supported by discussion based on some quantitative results of RQ1:

5.2.2.1 The majority of UAE private HEIs do not have a written ERM framework policy. However, the ERM or risk management policies that do exist have all the traditional elements of a risk management policy including the "risk appetite" and "risk tolerance" concepts.

While conducting the preliminary research and the pilot study, the researcher concluded that the overwhelming majority (almost 85%) of the UAE private universities do not have a clear written ERM policy. That was a major challenge for the document analysis phase in particular. However, in addition

to the survey results, the document analysis in particular showed that the risk management policies adopted by the selected UAE HEIs define clearly the vision, mission, purpose and overall concepts used in the policy manuals. However, the survey results showed very low scores in terms of the application and identification of important traditional risk management concepts such as "risk appetite" (where only *n*= 13 respondents identified the existence of this concept in their ERM policies), "risk mitigation" (where only *n*= 19 respondents identified the existence of this concept in their ERM policies) and "risk tolerance" (where only *n*= 34 respondents identified the existence of this concept in their ERM policies). However, "risk assessment plan" and "risk assessment and evaluation" came at the top of respondents' choices. This means that private universities in the UAE need to exert more serious efforts in their ERM implementation efforts, starting with building a comprehensive policy encompassing all traditional elements of risk management. As a general conclusion agreed on by almost all ERM researchers, this may give another indication as to why higher education is lagging behind in terms of risk implementation maturity when compared with other corporate sectors and private businesses.

5.2.2.2 ERM as a concept and process started to gain attention in UAE higher education following the issuance of the CAA risk-based Stipulations.

Special attention started to be diverted into risk management and ERM as necessary QA concepts at UAE HEIs as early as 2001. The UAE CAA was the official rating agency sponsored by the MoE, which required from UAE HEIs evidence of the existence of encompassing and integrated risk management plans to guarantee a productive credit rating for their academic programmes. In this sense, it was found by the researcher that the earliest ERM programme in UAE higher education was guaranteed to have been launched in 2001 with the first publication of UAE CAA. The statistics of the survey study show that 50% of the respondents agreed that ERM has been in use for an average of 6–10 years in UAE HEIs. Almost 77% of all responses indicated a mature level of ERM adoption and implementation, with the number of application years exceeding 10 years. However, the introduction by the UAE's MoE of a clear form of "*risk-based approach*" to the Institutional Licensure and Program Accreditation through the CAA *Standards* in 2019 helped gain more attention in terms of the requirement of adopting and implementing a clear and proven form of risk management or ERM framework in UAE HEIs.

5.2.2.3 The most cited impetus for the ERM programme initiation and adoption has been identified to be the "compliance with local regulatory laws".

The majority of the responses in the selected HEIs selected "Compliance with official regulatory laws" as the main driver for the adoption of a clear ERM policy (91.5% of the respondents in the public

institutions and 84.9% of the respondents in the private institutions). The interview results also came in support of this conclusion, where all the interviewees agreed that risk management or ERM policy formulation action is mostly a response to government-mandated regulations. However, UAE HEIs are adopting risk management more than ERM to fulfil the basic requirement of their QA programmes as mandated by the MoE. The interview results showed that several institutions, especially the public ones, apply ERM more effectively, not only as a response to the regulations mandated by the educational authorities, but also because ERM is an essential integrated part of their broader QA and corporate governance system.

5.2.2.4 Almost all of the selected UAE HEIs have their own ERM framework, developed based on all commonly known sources or risk management policies.

The findings of all phases of the study emphasised the statement that the selected UAE HEIs have cited all commonly and universally accepted frameworks of ERM in the development of their risk management policies. The survey results showed that the majority of all participants (n= 65, representing 64.36%) agreed that the ERM framework adopted in their institution is based on all the accepted sources of ERM frameworks, including the COSO framework and ISO 31000, as well as local regulations and laws such as the CAA. This may indicate another sign of an acceptable level of ERM implementation maturity in UAE HEIs. However, even though ERM researchers have agreed that ERM is somewhat fresh as a concept (with the COSO guidelines first issued in 2004, and then revised in 2013 and 2014; and ISO 31000 in 2009), the majority of UAE HEIs have chosen their own way by picking and choosing from the available third-party service providers in the market to support in the development of their own ERM policies. The document analysis and interviews showed that each of the selected HEIs have followed their own path to choose what fits their current processes, academic programmes, and corporate culture.

5.2.2.5 Most UAE HEIs have a "defined list of risks" that are reviewed by their CROs and audit committees.

This finding is supported by the survey, where 47.2% of respondents stated that they are "very aware" and 22.5% confirmed that they are "extremely aware" (collectively almost 70% of all responses) of the existence of a defined list of risks at their institutions. The interview results also supported this finding, where all interviewees agreed that defining a list of risks is conducted and reviewed annually, where the responsibility of maintaining this list is on the risk management officers and internal auditors. However, while a defined list of risks is recognised, the full implementation of risk mitigation solutions or the creation of opportunities based on them is still not mature enough. Most interviewees agreed that the

risk evaluation and assessment processes end with defining a list of risks and leave it there without taking responsive or fruitful action.

5.2.2.6 Document analysis and interviews showed that UAE HEIs use the term "ERM" when referring to their QA function, but they are still uncomfortable with it, and a few HEIs are not using the term at all.

The comfort level at the selected UAE HEIs with regards to the use of the ERM term is still in the initial stages. While the majority of the selected HEIs in this study use the term "risk management" (n= 73), some statistics show that ERM is trying to find its way in the QA system of UAE HEIs (n= 49). In addition, the majority of the survey participants and interviewees expressed awareness of a more traditional terminology when describing the QA processes at their institutions through using the terms "risk management" or "internal audit". However, there are clear indications in the results of the survey, document analysis and interviews that ERM identifies itself in a clear place across the corporate functions of UAE public universities more than in private universities. In all cases, the statistical results and themes obtained from the document analysis and interviews indicate that UAE HEIs seem to be still uncomfortable with using the term "ERM" and are clearly more comfortable using the term "risk management".

5.3 Confirmed Conceptual Framework of ERM

The reason the researcher delayed the presentation of the confirmed and final Conceptual Framework of ERM until the end of this chapter is because the discussion of results of the study informs and validates the proposed preliminary Conceptual Framework. The basic principles of the preliminary Conceptual Model proposed by the researcher (see Figure 2.3) were based on thorough review of ERM literature and some initial piloting studies done in preparation of the data collection and analysis. The results of the study show that in the selected UAE HEIs, ERM implementation indeed takes place in four, rather than three, linear levels: 1) Defining Risks, 2) Adopting ERM framework, 3) Implementing ERM framework, and 4) Integration of ERM into other academic functions. As defended by Lundquist (2015. P. 130), the major categories of successful ERM model in higher education are shaped and informed by the elements and aspects that make HEIs culturally unique: "mission driven organization; goal ambiguity, shared governance; and decentralized decision-making". The results of this study inform of a clearer conceptualisation of the ERM model where all elements of the ERM framework must play together to define the whole process starting from the "*risk definition and identification*" process, moving into the "*decision making of ERM adoption*", and reaching into full "*implementation*" and "*integration*" of ERM.

This model is very similar to the three linear levels defining the aspects of the model proposed by the researcher in the preliminary Conceptual Framework. However, the dissection of these aspects based on four levels come to give shape to a more mature and confirmed ERM Conceptual Framework as shown in Figure 5.1 below.

Therefore, based on the three linear level constructs identified in the study proposed preliminary Conceptual Framework (See Figure 2.3), the following Figure 5.1 shows how the proposed preliminary Conceptual Framework of the study (see Figure 2.3) has been validated through the results with the addition one level to the ERM integration process:

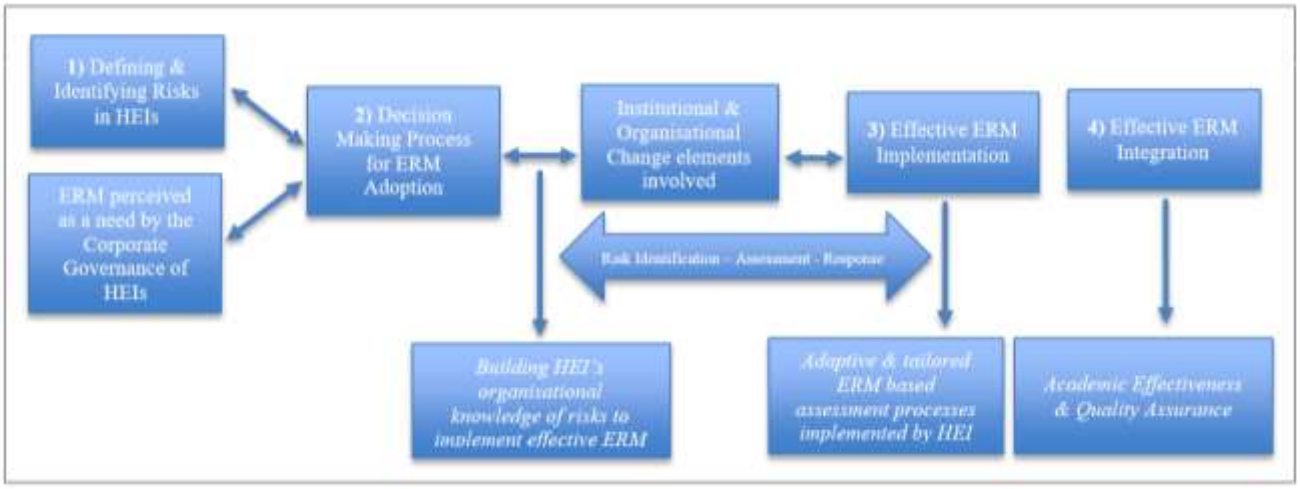


Figure 5.1 Final and Confirmed Conceptual Framework of ERM

CHAPTER SIX: CONTRIBUTIONS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

In this chapter, the researcher presents an overview summary of the whole research covering all chapters. Through this chapter, the researcher presents a summary of the study major contributions to literature, theory, methodology as well as to policy and practice in the field of ERM in higher education, which presents the major points of strengths in terms of both ERM research and ERM application. Additionally, this chapter sheds light on some areas of strengths, as well as some reflections on how the development of theory for this research can be used by other researchers undertaking similar research in similar contexts to contribute to the areas of study both theoretically and practically. Additionally, this chapter highlights the major limitations and weaknesses of the study. The limitations of the research were numerous, but a short list of the most important ones is accounted for in this chapter. Very interestingly, the final section of this chapter details certain recommendations proposed by the researcher that include guidelines for both researchers and practitioners in the area of ERM, which comes in line with the major insights identified in the literature review and the findings obtained from the data analysis chapter.

This chapter also presents the important response to one of the major objectives of this study, namely "*to propose a set of workable guidelines for more effective ERM strategies for HEIs in relation to effective ERM implementation in the UAE higher education context*". The conclusion section of this chapter represents a concluding recap of the whole research project and its structure, covering the research questions, aim, rationale, significance, objectives, Theoretical Framework, and methodology, as well as the major findings and results. The conclusion also provides for some reflections on where this study fits in the context of ERM research and how it can help advance ERM research and practice in the higher education context.

6.2 Contributions of the Research

Contribution to Literature:

In terms of its contribution to current literature, given that there is very limited research conducted on the implementation of QA and ERM concepts in higher education in the UAE and the region as a whole, the findings in this research will potentially throw some light onto the perceptions of faculty members and ERM administrators of the effectiveness of enterprise risk management (as an academic accreditation, assessment and evaluation tool) and its implementation in the UAE higher education institutions. Based on the existing ERM literature identified in this study (most importantly Mansour 2009; Lundquist 2013 and 2015; Deck 2015; Vandenberg 2017; Anton and Nucu 2020), the results of

this study have introduced concepts that have not been defined or dealt together in one study within the higher education context. These concepts include the introduction of significance of human perceptions factor to defining ERM implementation in higher education (based on the work of Bin Md. et al. 2014; Lundquist 2015; Deck 2015; Centko 2017), the introduction of risk maturity model testing in relation to ERM perception in higher education (based on the works of Hillson 1997 and 2019; Hopkin 2012; KPMG 2021; Lundquist 2015; Hoseini, Hertogh and Bosch-Rekveldt 2019), and finally how to measure and achieve academic effectiveness in higher education in the light of ERM implementation (based on the work of Centra 1993; Berk 2005). The findings will inform the current debate about ERM in higher education in the UAE and future research into the area. In particular, it will help establish a link between the most recent international studies conducted in the field and those that have been conducted in the UAE and the region as a whole with regards to ERM as a QA concept in higher education setting.

Contribution to Theory:

Another contribution of this research is in the area of theoretical framework. On the question of what constitutes a theoretical contribution, Whetten (1989, p. 490) argued that it is how research can add to the constituent elements of a theory, how its elements can establish standards for a general theory development, and finally the expectations that following researchers and reviewers will have regarding the appropriateness of the theories used in a given study. In this context, this research developed an appropriate and coherent theoretical framework to facilitate the research process. The research drew on the three interrelated theories of Institutional Organisational Theory, Legitimacy Theory and Organisational Change Theory to build the study theoretical framework. The study included these three management theories to examine how they fit in the context of ERM research. In a way, this study integrated these three established theories in business and ERM research to build a coherent theory that is applied in the higher education environment. The theoretical framework for this research provided additional evidence to support the importance and significance of not only introducing ERM into the higher education context, but also of its effective implementation and integration.

Hence, the main theoretical contribution is that this research has developed a coherent theoretical framework that is relevant to research into ERM in higher education in the context of the UAE and the region. This theoretical framework can be used in further research and adopted for use in similar studies related to the UAE and the region as a whole.

Contribution to Methodology:

In terms of the methodology, this study utilised an already tested and proven survey instrument to test the maturity level of ERM implementation in the selected UAE academic institutions (RMM), adopted from Wieczorek-Kosmala (2014) and Lundquist (2015). This adapted instrument helped the researcher to reach fruitful results about the ERM implementation maturity level of the selected UAE universities and paves the way for further studies in the UAE to invest and expand on the same instrument through broader sampling and more representative results. The themes and codes obtained from the document analysis and interviews also helped in the triangulation of the data results for content validity and reliability. This is also the first study to use the triangulation of a survey questionnaire, document analysis and semi-structured interviews to investigate perceptions regarding the effectiveness of ERM implementation in UAE HEIs. The trustworthiness and reliability of the findings were accomplished through the triangulation of results from both the quantitative and qualitative phases and putting them within the context of already existing empirical studies and accomplished research in the same field. In this sense, the main contribution of this research with regards to methodology is the fact the researcher used a recognised and tested mixed-method research methodology and applied them to the UAE higher education context to bring about desired outcomes.

Furthermore, two of the surveyed and sampled academic institutions in this study were selected to be representative of the public universities in the UAE. Perceptions of the effectiveness of ERM implementation were investigated in two out of the three major public academic institutions in the UAE, with their branches being distributed across different emirates in the country. This helped to a certain degree in making the findings representative of a good proportion of the total population of public universities in the UAE. Therefore, another positive contribution of the study in relation to methodology is the fact it managed to bridge the gap between ERM research and ERM practice, and therefore between ERM researchers and ERM practitioners and professionals, in both the business and academic risk management contexts.

Contribution to Policy and Practice:

From an empirical perspective, this study has utilised a proven Conceptual Framework of ERM in the higher education context and integrated it into the data collection instrumentation in support of answering the research questions and achieving its objectives. In a sense, the adoption of the study's Conceptual Framework helped lead the way to defining the important elements that constitute ERM policies and procedures. The findings of the document analysis and interviews, as well as the questionnaire, helped

the researcher formulate a set of guidelines that aim at refining ERM implementation strategies. Therefore, the major contribution of the research in terms of policy and practice is that these proposed guidelines and strategies may be utilised by ERM practitioners and QA officials in HEIs to help them refine their existing ERM policies.

6.3 Limitations of the Study

The limitations of the study are reflected in issues related to the context, subject and methodology adopted by the researcher. This study was conducted in the UAE and mainly focused on the higher education context of the UAE. From a thematic perspective, there is no guarantee this study will touch on all and the latest topics related to ERM in the higher education context, since the field is highly evolving and subject to constant and rapid changes and updates. In this context, the study focused only on selected cases of UAE universities based on their reputation and accredited programs. Only CAA accredited universities could have been the subject of the inquiry because of their ownership of some proven form of QA and ERM framework and policies. The study did not examine all variables, factors, or determinants of ERM programmes in a manner that could make the study generalisable to a larger population. Furthermore, this study did not examine the academic performance or afford to measure the quality of administrators in relation to QA or ERM functions, since these areas touch on their professional integrity, reputation, and confidentiality.

In terms of methodology, the study includes some limitations mainly associated with the survey questionnaire responses and the related generalisability and reliability of the quantitative results, as well as the trustworthiness of qualitative findings. In terms of generalisability, the quantitative results of this study were based on purposive and convenience sampling criteria and are therefore generalisable only to those UAE HEIs whose administrators or faculty members showed interest to participate in the survey, and which explicitly implement ERM as part of their academic and administrative processes and functions. It is worth mentioning that given the compelling current circumstances of COVID-19 and the resulting universal pandemic lockdown and restrictions, as stated earlier in the Methodology chapter, it was very difficult and time-consuming to ensure an ideally representative sample size from the actual population framework. Therefore, it was difficult for the researcher to reach out to a representative sample of all the population of faculty members and administrators in the UAE universities because of the strict regulations surrounding the academic setting, and due to administrative and organisational formalities.

On a different note, unfortunately, gaining respondent participation in surveys in the context of Middle Eastern higher education has never been an easy task (Hawamdeh & Raigangar 2014; Lages, Pfajfar & Shoham 2015). The reliability and trustworthiness of the data the researcher obtained from academic administrators and faculty members have always been a challenge in a sensitive field that touches on their professional and reputational integrity and reputation. The conclusions that the researcher has drawn tended to be contingent in the sense that they mainly rely on survey and questionnaire answers. One more limitation would be the fact that while the researcher performed the survey results' analysis, he found himself confronted by the need to change some suggested assumptions as a result of the participants' input, or refusal to provide input, with such issues not envisaged when the researcher framed the research aim and questions.

6.4 Recommendations for ERM Professionals and Proposed ERM Guidelines

6.4.1 Recommendations for ERM Professionals and Administrators

The findings from both the quantitative and qualitative phases of the study showed that the effective implementation of ERM in the higher education context requires unique and tailored tools and supporting elements. Academic professionals and administrators performing ERM as part of their role provided good insights into the way HEIs can boost and revive their efforts towards effective ERM framework implementation. It is also evident from the literature and findings of the study that HEIs may well borrow major elements of ERM models from the business sector and tailor them to suit the nature and context of the higher education environment. Since ERM or some advanced form of risk management implementation has been federally mandated in several major countries around the world, lessons can always be learnt from their HEIs that have shown a higher and more advanced level of maturity in terms of ERM implementation and integration. There is no harm, shame or risk in doing so. HEIs in the UAE will always have the opportunity to build their own model for ERM, which deviates from the bureaucratic restrains of "institutionalism" and embraces elements of "organisational change" and "academic effectiveness". In other words, UAE HEIs are not supposed to establish an ERM framework that focuses only on the need to comply with official and federally mandated licensure and accreditation regulations. An ERM model that embraces elements of "organisational change" and "academic effectiveness" will guarantee the seamless integration of all existing organisational structures. It will also enhance the decision-making process in a way that eventually contributes to effective corporate governance and helps the institution achieve its strategic objectives and core mission.

ERM professionals and administrators are therefore invited to contemplate what the researcher proposes to be a set of workable guidelines as they consider establishing or renovating their ERM programme. These guidelines will be summarised in the next section to reflect the findings of the researcher from both the quantitative and qualitative phases of the study. By considering both the quantitative and qualitative findings of this study, and through relying on recent literature conducted in the field, the researcher proposes the following guidelines that can help both ERM practitioners and academic administrators manage their risks in a more effective way. These guidelines will definitely exclude defining the time and detailed procedures required for proper ERM implementation, since as concluded by Lundquist (2015, p. 134), and based on the findings of this study, no HEI has shown the ability to define the time required for the full ERM process, starting from initiation and reaching into full mature integration:

> Since no ERM model at IHEs in higher education has reported elements of the highest level (integration), it is difficult to know how long ERM implementation will take in higher education as the sector matures and there are more models available to draw from in earlier phases.

However, what can really be defined in the guidelines are elements relating to the requirements, levels and phases of ERM implementation and integration.

6.4.2 Implications for Practice and Policy: Proposed Guidelines for Enhanced ERM Implementation Strategies

In its 2007 whitepaper titled "*ERM in Higher Education*", URMIA (2007, p. 9) concluded that:

> [the] first step in implementing ERM is to establish a framework [and that] each institution's framework will be unique. It is through the building of a framework that each organization decides which ERM components best address its needs and then decides how these components will be implemented on campus.

With this understanding in mind, building and adopting the right ERM framework in an HEI seems to be essential to effective ERM implementation. One of the three major objectives of this study is to propose a set of workable guidelines for more effective ERM implementation strategies for UAE HEIs. Such strategies help UAE HEIs achieve their strategic objectives and deal effectively with proper ERM adoption, implementation, and integration.

Based on the findings of the study, as well as the recommendations set by the researcher in previous sections, the remainder of this section explores possible and workable proposed guidelines that UAE HEI stakeholders may adopt as strategies for an enhanced and more effective ERM policy framework implementation. These guidelines are dependent on and derived from the recommendations set by the researcher in previous sections. As stated earlier, due to the fact that the adoption of some form of risk

management is federally mandated in the UAE higher education context, just like in other international higher education contexts, as evidenced in the literature and the findings of the study, UAE HEIs have a good opportunity to sustain and adopt a new enhanced model of ERM within their corporate governance system. This enhanced model need not be bound up with the limitations of "new institutionalism" as the Theoretical Framework of this study posited, nor does it have to be limited within unnecessary and surplus managerial constraints. Conversely, it must be integrated seamlessly with existing organisational structures and improved decision-making in a way that eventually contributes to the production of highly accredited academic programmes, a definitive form of institutional effectiveness and a better internally controlled governance system, accomplishing the strategic objectives of the institution.

As concluded in the Literature Review chapter, as well as throughout the rest of the study, there is currently good evidence of major higher education-focused associations, both public and private, whose major mission is to promote and endorse the ERM approach in HEIs. The list of these associations would include the UAE CAA, KPMG, CIMA, the National Association of College and University Attorneys (NACUA) and URMIA. As the findings of the study show, many UAE HEIs have adopted some form of QA or ERM programme to help them identify and respond to risks at a lower priority and to comply with officially mandated regulations at a higher priority. However, the document analysis and interview findings showed that very few UAE HEIs adopt risk management framework models that comfortably fit their higher education identity or contextual environment. Raanan (2009) posited that the absence of a fully integrated ERM model forces HEIs to rely on the risk management expertise developed for other sectors. Gurevitz (2009, para 12) concluded that first raw versions of adopted ERM frameworks have been presented to HEIs in unjustifiably sophisticated ways, "making it difficult to translate the concepts [of ERM] for many universities".

The literature and ERM studies all agree that the following are examples of major existing ERM frameworks, or at least can be considered as sources for effective ERM frameworks: 1) the COSO Enterprise Risk Management Integrated Framework; 2) the ISO 31000 Risk Management Draft Standard; 3) the URMIA Framework guidelines; 4) the Australia/New Zealand Standard Risk Management; 5) the Risk Management Standard by the Federation of European Risk Management Associations (FERMA); and 6) the Combined Code and Turnbull Guidance.

According to URMIA (2016, p. 81), HEIs can still adopt some or all these generally and universally accepted risk management frameworks, but they need to adapt the details to fit their strategic objectives and special nature:

> The best way for a university to be prepared for both highly unusual sets of conditions and more routine, everyday risks is to adopt a risk management framework that is broad and universally accepted, like the COSO and ISO 31000 frameworks, but then to follow-up with significant specificity tailored to the institution's strategic goals and objectives. In this manner, the framework will be consistent with generally accepted risk management standards while also being focused on the institution's dearest and most meaningful concerns.

URMIA (2018, p. 28) concluded that "risks can be mitigated through improved controls and/or process redesign. An ERM leader can provide tangible value to a process owner by collaborating on a reengineering project". For that reason, HEIs must always look for opportunities to redesign, reengineer, and therefore enhance their risk management or ERM policies and procedures.

However, what can be clearly identified to highlight the guidelines are elements relating to the respective institution's requirements, as well as the possible levels and phases of ERM implementation and integration. Three major categories highlight the recommendations directed by the researcher towards ERM professionals and administrators that can define the proposed guidelines: 1) define the required tools for effective ERM adoption and implementation; 2) determine proper ERM ownership; and 3) tailor your ERM policy and procedures to fit the specificity of your institution's goals. Based on these defined major categories, the following guidelines can be recommended to HEIs' ERM professionals and administrators, as well as decision makers:

- ***Start your journey towards proper ERM framework establishment and implementation by defining the right tools to conduct proper risk identification, proper risk mitigation and proper risk management integration***. The findings of this study have shown that the whole conceptual framework of effective ERM implementation would fall down without defining and owning the proper tools and means to do that. These tools would include the ready corporate governance environment; solid and pre-set internal controls; effective top-down decision-making; a dedicated risk management officer, team or even committee; proper support from management; and finally, a well-designed and compressive risk management framework that is integrated into all functions and departments of the institution.

- ***Defining the HEI's mission, vision and objectives is strategic to effective ERM framework establishment and implementation***. ERM framework implementation is not a haphazard process that happens by coincidence. Research and practice in the ERM field have shown that applying a traditional risk management process without relating it to the mission, vision and objectives of the institution will yield no effective results. The majority of HEIs stakeholders and especially risk

management administrators find it difficult to relate their risk management process to the strategic objectives of their institution if they do not start by establishing the right corporate governance environment. Effective corporate governance with good internal controls always helps HEIs identify their risks and opportunities in a clear way, as well as helping them achieve their strategic objectives and determine what ERM framework they need to adopt.

- ***From the beginning, faculty members with good knowledge of ERM must be involved in the ERM implementation process***. The literature and findings of the study have shown that the majority of risk committees or risk administrators have faculty "involvement" in the ERM implementation and integration process. Most HEIs do not work towards integrating the faculty organisational chart with the ERM business. Similarly, most faculty members do not volunteer to engage in the ERM or risk management process since their main focus is research and teaching. However, it will be particularly fruitful for HEIs to establish a clear understanding of the ERM objectives and the ERM language used in the adopted framework in order to create interestedness and homogeneity in their academic corporate culture.

- ***A CRO should be appointed if the ERM framework is sought to be implemented ideally and effectively***. The exact title or designation of the CRO may vary from one institution to another. However, in all cases a CRO's ERM responsibilities are always the same and they come as specialised, focused, and dedicated administrative responsibilities. Just like in private and financial businesses, HEIs would benefit from the appointment of one dedicated officer to cater for the ERM implementation process and assume it as their main task. The CRO can function as the custodian and owner of the ERM framework adopted by the institution. The skills and professional experience that CROs usually own help the institution not only to set up an effective ERM framework, but also to speed up and sustain the process of accomplishing its objectives. By understanding the compliance implications and adhering to the operational level of the ERM framework, a dedicated CRO would not only be an added value, but also a requirement.

- ***An effective ERM framework is one that integrates ERM policy into the actual body of the institution, its structures, corporate governance, and different functions***. It is true that the appointment of a dedicated CRO or formation of risk management committee is essential to the establishment of an ERM framework, but on the other hand the adaptation and integration of ERM concepts into the HEI's existing practices and structures would be even more vital to the ERM implementation process. ERM implementation is ideally reflected within the framework in terms of

phases. However, merging the ERM implementation process into other strategic functions and departments will help HEIs achieve their objectives in a better and more convenient way. It will also help map all existing functions and departments and unify them to ensure that the institution is moving from the established phase of ERM framework into the integrated phase. Consequently, this will ensure HEIs reach a better level of ERM maturity.

- ***A proper HEI ERM framework is one that differentiates between the business corporate culture and the academic culture***. It is misleading for the majority of risk management administrators at HEIs to copy their ERM framework model from the business sector. Some existing international risk management service providers have started to do a good job in this area by borrowing an ERM framework from the business field and tailoring it to suit the requirements and elements of academic institutions. In this perspective, while the corporate and financial sectors are very good resources for effective ERM frameworks and models, the corporate governance of HEIs is too different and unique to the extent that transferring a business risk management model would never be an easy task. It is agreed among risk management professionals and researchers that the elements of the risk management process are always the same: risk identification, risk assessment, risk prioritisation, risk mitigation, and finally risk register reporting. It is also agreed that the tools used in the risk management process are almost standardised across all different sectors. However, the nature of HEIs is unique, which makes it mandatory that the ERM framework to be utilised must be tailored to satisfy and suit the specific elements of the academic environment.

- ***In order to achieve valid and reliable results from the ERM implementation process, establish ERM acceptability at the initial phases of implementation.*** Since the overall purpose of ERM implementation is changing the corporate culture at an HEI, it must be noted that this requires a long, continuous, and complex process. This long process can be facilitated through designing and adopting a convenient ERM framework, one that is adapted to the existing culture and different functions of the HEI. "Achieving the long-term goal of improving the risk management culture at the institution requires understanding ERM as a long-term process that is ongoing and dynamic in nature" (Deck 2015, p. 82). Therefore, ERM professional or administrators need to tailor their ERM framework to suit any changes in a provided HEI's structure and overcome any challenges that they may encounter throughout the implementation. Just like corporate organisations seeking to sustain their resilience in their respective world, HEIs should seek to consider the lengthy but productive process of implementing the right ERM framework. In this context, HEIs that design their ERM

framework to be compatible with their existing culture will be more effective in the implementation of their ERM programme.

- ***To establish and implement an effective ERM model does not mean you have to start from scratch.*** The ERM exercise does not require risk management administrators and stakeholders to "reinvent the wheel". This notion of not reinventing the wheel while establishing and adopting the right QA or risk management framework was emphasised by three of the interviewees of this study. What they need to really do is simply to start where the others have ended by borrowing the right tools and models from other HEIs, both international and local, and pick the ones that have implemented ERM over a considerable duration of time. Lessons can surely be learned from the ERM experiences of such HEIs, as well as from their failures and successes. Specialised and professional organisations providing good advice and consultancy on the formation and implementation of effective ERM models are on the increase. Online conferences, the ever-growing number of journal articles and research discussing ERM in higher education, and so forth are all good and available resources to learn from.

- ***Risk management professionals should not sit in their ivory tower while establishing or implementing their ERM framework.*** They must own full awareness of the level of risk maturity at their institution and work towards achieving a balance between ERM as a process, as a culture and as a product. The findings from the literature review and data collection have shown that the whole risk management process has never been a welcomed thought for academics in different higher education environments. Since the primary focus of faculty and academic administrators is research and the learning process, risk management administrators should exert more efforts in selling their ERM thoughts and concepts across the different departments and functions of the university. The inclusion of senior management decision-making in the population of risk management elements within the academic culture has proven to be successful in many HEIs. This inclusion will at least help both faculty and administrators approach ERM differently and become better and more efficient players in the ERM business.

6.5 Recommendations for Further Study

While discussing the subject of ERM implementation in the higher education context, it is concluded by the researcher that the ERM inquiry does not require other researchers to reinvent the wheel. The results of both the quantitative survey and qualitative document analysis and interviews have provided several

findings, insights and conclusions for follow-up studies and further investigation. The first recommendation for further educational researchers would be to widen the scope of academic institutions and the number of participants covered in their studies for more generalisability of the results. In this sense, they are encouraged to include more than seven institutions out of the 74 CAA accredited universities in the UAE. One area of further study may deal with the lack of full integration of ERM and how it impacts the quality of different functions across academic institutions. This would require a proper correlational type of research where more participants and more HEIs are included and investigated. The absence of clear and solid written ERM policies and the limited inclusion of all ERM components in some existing written policies such as risk appetite, risk tolerance and risk mitigation plans would be an indication that HEIs in the UAE have opted for more focus on QA processes in general, than on risk management or ERM specifically. Another area of study would be to investigate the relationship between academic corporate culture and the ability or tendency of HEIs to implement and integrate effective ERM processes across campuses.

Another area for further investigation would be a mixed-method comparative study covering the two important categories concluded by the researcher in this study: *first*, public versus private universities; and *second*, premature versus more mature institutions in terms of ERM adoption, implementation, and integration. This comparison might be the focus of a study that includes more in-depth elements such as the relative importance of various aspects of ERM implementation, the level of ERM decision-making, and determinants of ERM maturity levels and values after more years of implementation. Questions that may need to be asked in another study would include the reasons why HEIs in the UAE and similarly in other higher education contexts chose not to have ERM elements in their corporate governance system. More focus would need to be placed on areas such as risk maturity and the strategic choice of HEIs to adopt ERM elements or forego them completely. Furthermore, how HEIs can adapt to the full integration of ERM elements is another interesting question that needs to be investigated.

A more focused study could be conducted to deal with the ERM inquiry from a purely management or administrative perspective. This study would add to the understanding of ERM in higher education through the eyes of ERM practitioners only. This study showed that faculty members are not always involved in the ERM process, nor are they engaged in QA concepts at most HEIs. For that reason, a study focusing on administrators and ERM practitioners only would be more fruitful and yield more tangible results. Finally, a comparative causal type of study could be conducted by educational researchers to encompass the elements of the causal relationship between the effective implementation and integration

of ERM and QA in higher education. However, this type of study necessitates a different type of research methodology that includes more in-depth statistical parametric, rather than non-parametric, data analysis and covers a wider scope of the population with a larger sample.

6.6 Conclusion and Overview of the Study

This study aimed to answer the major research question of investigating the perceptions of faculty members and academic administrators regarding the effectiveness of ERM implementation and integration in selected UAE HEIs. The study focused on the utilisation of theories and the literature, while paving the path for original research and primary data collection and analysis. A mixed-method study design of quantitative and qualitative data collection and analysis was used to answer the research questions, achieve the main aim and subordinate research objectives set in Chapter 1, as well as to define recommendations. To name but a few, the study findings helped in producing a set of practical and relevant recommendations directed to both researchers in the ERM field as well as risk management practitioners. The recommendations focus on how a better and more effective ERM implementation would lead to academic effectiveness and clearer forms of academic QA. This is the first time that such an inquiry has deeply investigated the UAE as well as the regional higher education context. The study has demonstrated how the reliance on effective QA practices such as ERM can definitely lead to more robust academic effectiveness.

Through an extensive review of the literature and previous research in the field, this study addressed and recognised research and empirical gaps between ERM theory and ERM practices in selected UAE academic institutions. It further highlighted the significance of the ERM inquiry in the higher education context to the extent that it highlighted how unjustifiably underestimated this area of study is. Through faculty members' and academic administrators' perceptions, this study identified all potential and actual issues surrounding the effective implementation of ERM in HEIs and provided recommendations and guidelines for enhanced ERM implementation strategies.

For the collection and analysis of data, a mixed-method study design was adopted to obtain the perceptions of faculty members and administrators in terms of the effectiveness of ERM implementation in some selected UAE universities, in order to invest in their awareness to develop valuable results that would help further advance higher education ERM research both empirically and theoretically. Document analysis and interviews were conducted to help the researcher provide a real analysis of the actual status of ERM documents and practices and ERM implementation, in the selected HEIs. This

analysis helped provide a set of recommendations for both researchers and practitioners in the field of ERM studies, as detailed in this chapter.

Generally, the major findings and results uncovered show an acceptable level of awareness among major academic stakeholders regarding the level of maturity degree of effectiveness of ERM adoption, implementation, and integration at their respective institutions. The results also showed that ERM, being a more mature and advanced level of the risk management adoption concept, is still not appreciated in the higher education sector where more research and more practical efforts need to be conducted to prove its importance. Additionally, the findings of both the quantitative and qualitative phases of this study revealed that when checked against proven measures of maturity testing, ERM in UAE HEIs is still in the "initial to moderate" stages of the maturity continuum. Finally, the researcher's qualitative results supported the theoretical and empirical assumptions surrounding ERM research that the effective application and implementation of ERM guarantees to sustain the concepts of academic "effectiveness" and "QA" across all different academic functions and programmes.

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APPENDICES

Appendix 1 – Questions of the Study

Table 1.1: Research Questions

	Research Question
RQ1	*What are the perceptions of faculty members and ERM administrators of the effectiveness of ERM implementation in their HEIs?*
RQ2	*What are the current ERM policies and practices in the UAE HEIs?*
RQ3	*What are academic administrators and faculty members' recommendations for a set of workable guidelines which help build a more effective ERM framework?*

Appendix 2 – Survey Questionnaire Instrument (Perceptions Survey Questionnaire)

The questions in the Perceptions Survey Questionnaire are related to the major aim and questions of the study, as further defined in the following Table:

Research Questions	***Research Objectives***	***Research Approach***	***Research Instrument***	***Data Analysis***
Q1	*Investigating the perceptions academic administrators and faculty members have of the effectiveness of Enterprise Risk Management (ERM) implementation in UAE HEIs*	*Quantitative*	*Two Separate Structured Questionnaires*	*Statistical: Descriptive)*
		Qualitative	*In-depth Semi-Structured Interviews*	*Thematic Coding & Categorising*
Q2	*Exploring the current status of ERM policies and practices in UAE HEIs*	*Qualitative*	*Document Analysis*	*Analytical & Content Analysis*
Q3	*Determining how the academic administrators and faculty members' responses on the implemented risk management practices help propose a set of workable guidelines in the form of strategy framework for UAE HEIs in relation to effective ERM implementation in the UAE higher education context*	*Qualitative*	*In-depth Semi-Structured Interviews*	*Thematic Coding & Categorising*

Summary of Survey Instrument & Directions:

In this survey, approximately 100 academic administrators and faculty members conveniently selected from five UAE HEIs. The participants are selected based on either their risk management responsibility at the HEIs or their knowledge and awareness.

You will be asked questions about your perceptions regarding the effectiveness of Enterprise Risk Management (ERM) implementation processes at your institutions. The purpose is to gain perception related insights into the current ERM or risk management practices in your HEI setting. Selected participants from the same institution may also be chosen to participate in follow-up qualitative interviews upon their consent and convenience. The following questionnaire items will take approximately 15 - 20 minutes to complete.

Please note that participation of the selected administrators and faculty members in this study is completely voluntary, and if you feel uncomfortable answering any question, you may withdraw at any time during the survey. There are definitely no foreseeable risks associated with or resulting from this study. However, your survey responses will be treated with *strict confidentiality* and the findings and data resulting from this study will be reported *anonymously* and referred to only in the aggregate. Your information will be coded and therefore will remain confidential. If you have questions at any time about any of the survey items, you may approach Yaser Ibrahim at +971-555-44-20-22 or by email at the email address specified below.

- ***Group A Questions*** *are for participants' perceptions of the nature of ERM adoption in their academic institution; it is also directed for participants' knowledge and awareness of the steps taken at their institutions for the identification, implementation, and evaluation of ERM practices.*
- ***Group B Questions*** *are for participants' perceptions of and involvement in effectiveness of ERM implementation in their academic institution.*
- ***Group C Questions*** *are for participants' perceptions and feedback on the implemented ERM Policies and Guidelines adopted in their Institutions, and how effective they may be in relation to their academic institution.*

Please read each statement carefully, and then choose the answer which represents you, or indicate the degree to which you agree or disagree with each statement by selecting the appropriate choice.

Demographic Information:

1. Please specify if you are a faculty member or administrator:

   - Faculty Member ❑
   - Administrator ❑
   - Both ❑

2. Please specify your academic qualification:

   - PhD ❑
   - Masters ❑
   - Bachelor's Degree ❑
   - Other – Please specify ☐

3. Please specify the department or section you are operating in from the following areas:

   1. Administrative / HR Department ❑
   2. Financial Affairs ❑
   2. Academic Audit: Internal & External ❑
   3. Senior management: President/Chancellor ❑
   4. Legal/ Compliance ❑
   5. General and Amin Services ❑
   6. Faculty/Teaching Staff ❑
   7. Other ❑

4. Please specify how many years of professional experience you have in the academic institutions.

1	2	3	4	5	6	7	8	9	10	11	Other
❑	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑	☐

5. Please specify if the academic institution you are working for is a public or private institution:

- Public ❑
- Private ❑
- Other – Please specify

6. Please specify which types of study programs your academic institution is offering (*please tick all that apply*):
   - Undergraduate ❑
   - Postgraduate ❑
   - Doctorate ❑
   - All of the above ❑
7. Please specify your roles and responsibilities against risk management, quality assurance (QA) and academic effectiveness (*please tick all that apply*):
   1 Designing and implementing the overall risk management in fulfillment of the QA process for the institution. ❑
   2 Performing risk assessment as a major duty: analysing current risks and identifying potential risks which are affecting the institution. ❑
   3 Performing risk evaluation as a major duty: Evaluating the institution's handling of risks and comparing potential risks with criteria and requirements set out by the institution. ❑
   4 Risk reporting: Educating the board and administration about the most significant risks to the institution; ensuring faculty heads understand the risks which might affect their departments; ensuring staff understand their own accountability for individual risks. ❑
   5 Conducting risk policy and compliance audits in compliance of the CAA *Standards* requirements, which will include liaising with internal and external auditors and undergoing periodic reviews for accreditation and licensure purposes. ❑
   6 Building risk awareness amongst staff by providing support and training within the institution. ❑

A. Participants' perceptions of the nature, processes, adoption and implementation of Risk Management and/or QA in their academic institution:

A-1: *Following questions are for both faculty members and administrators, preferably with risk management (ERM) and/or QA responsibilities:*

8. Irrespective of what you call it, would you agree that your institution has some form of clear and definitive risk management and quality assurance program?
   Knowing that risk management could be defined as "*a process, initiated by an entity's board of directors, management and other administrative personnel, applied in strategy setting across the institution, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide tangible outcomes regarding the achievement of the institution's objectives and quality assurance (QA)*"
   1. Strongly Agree ❑
   2. Agree ❑
   3. Neither Agree nor Disagree ❑
   4. Disagree ❑
   5. Strongly Disagree ❑

9. In which way would you describe the actual corresponding term used by your institution for risk management and QA program implementation?

    1. Risk Management (RM) ❑
    2. Enterprise Risk Management (ERM) ❑
    3. Strategic Risk Management (SRM) ❑
    4. Quality Assurance (QA) ❑
    5. All of the above ❑
    6. Other – Please specify:

10. Irrespective of the term used by your institution, how many years has your institution been applying risk management or QA as a process?

1	2	3	4	5	6	7	8	9	10	11	Other, please specify
❑	❑	❑	❑	❑	❑	❑	❑	❑	❑	❑	

11. Who is in charge of your institution's decision-making regarding risk management and QA processes implementation?

    1. Board of Trustees ❑
    2. President/Chancellor ❑
    3. Vice President ❑
    4. Internal Auditor ❑
    5. Risk Manager ❑
    6. Risk Analyst ❑
    6. Head of Effectiveness ❑
    7. Legal Advisor ❑
    8. Insurance manager ❑
    9. Other, please specify.

12. I am aware that my institution named a chief risk or QA officer, or an officer dedicated to risk management or QA.

    1. Extremely Aware ❑
    2. Very Aware ❑
    3. Somewhat Aware ❑
    4. Not so Aware ❑
    5. Not at All Aware ❑

13. I am aware that my institution has a dedicated risk management group/committee that facilitates risk management or QA.

    1. Extremely Aware ❑
    2. Very Aware ❑
    3. Somewhat Aware ❑
    4. Not so Aware ❑
    5. Not at All Aware ❑

14. I am aware that my institution has a risk management or QA Committee?

    1. Extremely Aware ❑
    2. Very Aware ❑
    3. Somewhat Aware ❑
    4. Not so Aware ❑
    5. Not at All Aware ❑

15. I am aware that my institution senior leadership makes a periodic review of risk management and QA processes.

1. Extremely Aware ❑
2. Very Aware ❑
3. Somewhat Aware ❑
4. Not so Aware ❑
5. Not at All Aware ❑

16. I am aware that my institution maintains a defined list of risks (strategic, operational, legal, financial or academic).

1. Extremely Aware ❑
2. Very Aware ❑
3. Somewhat Aware ❑
4. Not so Aware ❑
5. Not at All Aware ❑

17. I am aware that my institution's risk management or QA programme is mostly in compliance with

1. The COSO framework with its updates ❑
2. ISO 31000 ❑
3. Local regulations and laws, such as the CAA Standards ❑
4. All of the above ❑
5. None of the above ❑
6. Other, please specify.

***A-2**: Following questions (18 to 34) are optional for faculty members, but especially directed to administrators with Risk Management and/or QA responsibilities to test their risk maturity awareness and perceptions, where A= initial, D=very mature):*

18. Please select the statement which mostly relates to your perception of HEIs Risk Management and QA adoption and implementation:

	A	B	C	D
Risk Management & QA as a Process	There is awareness of risk management and QA in all aspects of the academic process, but risk management/ QA is not implemented as a process or function.	Handling effective risk management and QA functions as top-down management processes.	Risk management and QA functions are integrated into routine admin and academic processes.	Risk management and QA are approached as defined and independent effective processes or functions.
	❑	❑	❑	❑

19. Please select the statement which mostly relates to your perception of HEIs Risk Management or QA adoption and implementation:

	A	B	C	D
Risk Management as a Culture	Senior administration or leadership awareness is required.	No senior administration leadership awareness is required.	Risk management and QA outcomes are seen as a primary concern with risk management implementation	Routine responses to high level risks change organisational culture at the HEI

	❑	❑	❑	❑

20. Please select the statement which mostly relates to your perception of HEIs Risk Management adoption and implementation:

	A	B	C	D
Risk Management as a Framework	Risk management framework is not defined, developed or used.	Risk management is not implemented in my institution as a strategic framework in a clear way.	Risk management framework is defined, developed and used.	Risk management is not only defined, but also implemented in my institution as a strategic framework, in a clear way.
	❑	❑	❑	❑

21. Please select the statement which mostly relates to your perception of HEIs Risk Management or QA adoption and implementation:

	A	B	C	D
Risk Management Identification & Reporting	Risks are regularly identified and reported throughout the institution.	My institution has established risks identification and reporting mechanisms.	My institution has a clear policy for staff and students routine reporting of risks in a formal and systematic way.	My institution has a clear policy for identifying and reporting on risks throughout the all the organisational levels.
	❑	❑	❑	❑

22. Please select the statement which mostly relates to your perception of HEIs Risk Management or QA adoption and implementation:

	A	B	C	D
Risk Management Evaluation	No risk evaluation is performed in my institution.	A formalised risk evaluation is performed.	Risk evaluation process is strategic to my institution's operations and processes.	Institutional risk evaluation helps integrate top risks into better planning and decision-making.
	❑	❑	❑	❑

23. Please select the statement which mostly relates to your perception of HEIs Risk Management or QA adoption and implementation:

	A	B	C	D

Risk Management/ QA as a Strategic Planning Decision	Risk management is performed to help in the institution's strategic planning.	Risk management is performed with no relevance to or impact on the institution's strategic planning.	Risk management is not intentionally connected to and integrated in my institution's strategic planning.	Risk management is intentionally connected to and integrated in my institution's strategic planning.
	❑	❑	❑	❑

24. Please select the statement which mostly relates to your perception of your institution's Risk Management or QA policy implementation:

	A	B	C	D
Risk Management/ QA Policy Application & Tools	At my institution, there is no individual or committee in charge of risk management and/or QA policy implementation.	At my institution, there is an individual or committee in charge of risk management and/or QA policy implementation.	At my institution, there is an individual or committee who is authorised to implement risk Management and QA.	At my institution, the individual or committee who is authorised to implement risk management and QA own the proper support and tools to enact them as academic functions.
	❑	✓	❑	❑

B. Participants' perceptions of the Effectiveness of Risk Management Implementation in their Institutions in relation to QA:

Please provide your rating of the extent to which the following statements apply to your institution in terms or risk maturity:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly disagree
25. Risk management in my institution is effective and efficient in the way it is integrated into all its academic and admin practices and processes, including QA.	❑	❑	❑	❑	❑
26. The institution's risk management and QA processes are adapted to the nature of its areas of focus and strategies.	❑	❑	❑	❑	❑
27. Risk management is implemented as a process and culture and reflected in the practices of my institution.	❑	❑	❑	❑	❑
28. Risk management processes are integrated into academic and organizational processes of my institution, including QA, in an effective manner.	❑	❑	❑	❑	❑
29. My institution has a sufficient and solid understanding of all its risks.	❑	❑	❑	❑	❑
30. Effective risk management in my institution involves an explicit top-down decision-making.	❑	❑	❑	❑	❑
31. Effective risk management is viewed within the institution as giving the rationale for its effective corporate governance and therefore QA function.	❑	❑	❑	❑	❑
32. Effective risk management reporting, both internal & external, helps legitimate and consolidate effective academic internal governance and the QA process.	❑	❑	❑	❑	❑

33. Administrators consider effective risk management as crucial for the achievement of their institution's expectations and QA objectives.	❑	❑	❑	❑	❑
34. Faculty members consider effective risk management as vital to the learning process & meeting essential academic objectives, and therefore contributing to the overall academic QA process.	✓	❑	❑	❑	❑

C. Participants' perceptions of the implemented Risk Management Policies and Guidelines adopted in their Institutions and therefore of Risk Management integration (*Assuming a form of Risk Management (such as ERM) or QA policies is/are indeed adopted and implemented****):***

35. Are you aware if your institution has a written policy on risk management or QA?

1. Extremely Aware ❑
2. Very Aware ❑
3. Somewhat Aware ❑
4. Not so Aware ❑
5. Not at All Aware ❑

36. Which of the following do you consider as reasons why risk management framework policy was formulated and implemented at your institution in the way it was (*Select all that apply*):

1. Compliance with official regulatory law, such as from the MOE ❑
2. Senior management decision or mandate for implementation ❑
3. Response to legal or compliance failure ❑
4. Strategic planning ❑
5. Part of the process of major risks assessment ❑
6. Sustaining the process of decision-making ❑
7. Adapting to the local and international economic environment ❑
8. Hoping for a more effective academic process, and therefore, success. ❑
9. Other, please specify.

37. Does your risk management or QA policy include any of the following concepts (*select all that apply*)?

1. Risk based assessment and evaluation ❑
2. Risk assessment plan ❑
3. Risk tolerance ❑
4. Risk appetite ❑
5. Risk impact ❑
6. Risk concepts ❑
7. Risk mitigation ❑
8. Quality assurance stipulations (QA) ❑
9. All of the above ❑
10. None of the above ❑
11. Other, please specify.

38. The existing risk management policy helped your institution achieve academic effectiveness and QA.

1. Strongly Agree ❑
2. Agree ❑
3. Neither Agree nor Disagree ❑

4. Disagree ❑
5. Strongly Disagree ❑

39. Would you be interested in being contacted for a short (half an hour) follow up interview?

1. Yes ❑
2. No ❑

If you would like to participate in the second part of this research, namely in a short focused "interview", please, contact me at my email: 20180413@student.buid.ac.ae .

**** END OF SURVEY QUESTIONS ****

Appendix 3 – Semi Structured Interview Protocol & Interview Schedule

This qualitative semi-structured interview schedule has been developed by the researcher based on the research questions, and more particularly with special attention placed on RQ1 (partially) and RQ3 (fully):

- *RQ1: What are the perceptions of faculty members and Enterprise Risk Management (ERM) administrators of the effectiveness of ERM implementation in their HEIs?*
- *RQ3: What are academic administrators and faculty members' recommendations for a set of workable guidelines which help build a more effective ERM framework?*

The interviewees include five key respondents (n= 5; n= 3 risk management administrators and n= 2 faculty members with knowledge of risk management and quality assurance concepts and processes), identified by the researcher on the basis of the convenience sampling, selected based on their availability and profound knowledge in the field. The faculty members and risk management administrators were requested to answer ten face-to-face open-ended questions, to identity the exiting Risk Management (ERM) and/or QA policies and processes applied in their respective institutions and to define their perceptions regarding the effectiveness of their current and existing ERM and/or QA policies and processes.

Interview Protocol:

I would like to express my gratitude and appreciation to you for granting me the opportunity to run this interview. I thank you also for agreeing to participate in this study. I would like to record the interview so the study can be as accurate as possible. You may request that the recorder be turned off at any point of the interview.

No information provided in this interview will be attributed back to you unless you choose otherwise. The information obtained will be used for academic and research purposes only. Your participation is completely voluntary and anonymous, and you may withdraw at any time during the interview, without any consequences. A copy of the results may be provided to you upon your request.

Thank you for participating in this interview. If have any questions regarding my research and should you like to obtain any further information, please contact me at: Email: 20180413@student.buid.ac.ae, or mobile No. +971-555-44-20-22.

Sincerely,
Yaser Abdulrahman Ibrahim

Interview Schedule

- **FOR Research Q1:**

1) What quality assurance (QA) or risk management approach is adopted in your institution?

2) What is your understanding of the existence of ERM (or risk management) as a QA concept in your institution?

3) What form of existing policy does your institution have for ERM implementation or QA achievement?

- **FOR Research Q3:**

4) What were the actions taken (or consultations made) by your institution when ERM or QA policy was being formulated?

5) Please describe your ERM/Risk Management/QA Committee and how it contributes to formation and implementation of your ERM policy.

6) In which way does your institution's ERM/Risk Management/QA policy help identify and assess risks?

7) Since ERM implementation is a process to mitigate risks and foresee opportunities, in which way has the adopted ERM/QA framework in your institution helped mitigate or control risks, and create opportunities?

8) Could you please elaborate on how the adopted ERM/QA framework policy in your institution has helped enhance the financial viability of your institution?

9) Please tell me how the adopted ERM/QA framework policy in your institution has helped create organisational change in your institution?

10) Please tell me how the adopted ERM/QA framework policy in your institution has helped create or support institutional effectiveness in your institution?

Appendix 4: Sample Request of University Permission

Date: October___, 2020

Dear Mr./Mrs.,

The British University in Dubai offers a PhD Program of Education (PhD) degree to interested students, teachers, and professionals in the United Arab Emirates to maximize their career opportunities and increased their knowledge. The DED program is designed in collaboration with the School of Education of the University of Birmingham, one of Britain's leading schools of education. The PhD program is approved and accredited by the Ministry of Higher Education and Scientific Research, UAE and has graduated many students since its start in 2005 in several different areas in education. The purpose of this letter is to kindly ask you to allow Yaser Ibrahim, a student in this program, to be able to conduct research by conducting surveys and interviews as appropriate to the study, as would be agreed by your administrators and faculty members. Data collected will be anonymous and will be treated with utmost confidentiality.

Finally, we look forward to your kind cooperation. If you require any additional information, please don't hesitate to contact Dr. Abdulai Abukari, (PhD Program Coordinator) at abdulai.abukari@buid.ac.ae or _____.

Sincerely Yours

Dr. Abdulai Abukari
Professor of Education Policy & Leadership

Appendix 5: Sample Participants Letter

To Whom It May Concern

Dear Mr./Mrs.,

I am conducting this research study in the specialization of Education Management, Leadership and Policies from the British University in Dubai (BUiD). The purpose of the research is ***Investigating the Effectiveness of Enterprise Risk Management Implementation in UAE Higher Education Institution****s*. As I receive your permission, I will send you a survey questionnaire for completion. The data resulting from these questionnaires will be used for analysis in the study. I may also request your permission to provide me with some topic related documents related to the Document Analysis portion of my study.

Please note that the information collected from the administrators and faculty teachers will be kept **highly confidential** and will be used **only** for the purposes of this research. If you have any enquiries about this research study, please contact the undersigned.

Thank you for your cooperation in this academic endeavor.

Best Regards,

Yaser Ibrahim
20180413@student.buid.ac.ae
October 2020

Enclosed – BUiD Consent Form dated 3rd August 2020.

Participants Consent Letter

To Whom It May Concern

Dear Sir/Madam,

I am conducting this research study in the specialization of Education Management, Leadership and Policies from the British University in Dubai (BUiD). The purpose of the research is ***Investigating the Effectiveness of Enterprise Risk Management Implementation in UAE Higher Education Institutions***. As I receive your permission, I will send you a survey questionnaire for completion. The data resulting from this questionnaires will be used for analysis in the study. I may also request your permission to provide me with some topic related documents related to the Document Analysis portion of my study.

Please note that the information collected from the administrators and faculty teachers will be kept **highly confidential** and will be used **only** for the purposes of this research. If you have any enquiries about this research study, please contact the undersigned.

Thank you for your cooperation in this academic endeavor.

Best Regards,

Yaser Ibrahim
20180413@student.buid.ac.ae
October 2020

Enclosed – BUiD Consent Form dated 3rd August 2020.

Appendix 6: Sample Informed Consent Form

PARTICIPANT CONSENT FORM

Provide a brief introduction indicating the purpose of the research study and the tool. Please tick (√) the following boxes to indicate your agreement:

- □ I have read the information provided about the purpose of the study.
- □ I understand that the data collected will be completely anonymous and that my privacy and confidentiality will be respected.
- □ I understand that I have the right to withdraw from this study at any time without prejudice.
- □ I understand that any reports that will result from the data collection will not identify any individual participants.
- □ I am willing to participate in the survey.
- □ I am willing to participate in a classroom observation.

Name: _____

Signature: _____ Date: _____

Appendix 7: Participation BUiD Ethics Form

PARTICIPANT BUiD ETHICS FORM

Research Research Ethics Form (Low Risk Research)
To be completed by the researcher and submitted to the Dean's nominated faculty representative on the Research Ethics Committee.

i. Applicants/Researcher's information:

Name of Researcher /student	Yaser Abdulrahman Ibrahim
Contact telephone No.	+971 555 44 20 22
Email address	20180413@student.buid.ac.ae
Date	22 March 2020

ii. Summary of Proposed Research:

BRIEF OUTLINE OF PROJECT (100-250 words; this may be attached separately. You may prefer to use the abstract from the original bid):	Despite its challenging nature, the implementation of ERM in higher education has proven successful in many countries around the world. In my study, I propose to investigate the effectiveness of enterprise risk management (ERM) implementation in higher education institutions (HEIs), with specific focus on UAE HEIs. Since the introduction of risk-based assessment and accreditation system in UAE higher education in 2001, updated in 2011 and 2019, there have been few academic studies and research to study the implementation of risk management and ERM in UAE HEIs. Throughout my study, I will make a reference to academic quality and effectiveness as the ultimate outcomes of the ERM implementation process at HEIs. It is therefore an elaborated examination into the implementation of ERM in UAE higher education context in terms of how ERM is perceived by academic administrators and faculty members. It will be an attempt to further scrutinise the potentials that application of a successful and proven ERM framework in the academic environment and how it would inevitably lead to powerful and meaningful effective performance by HEIs stakeholders, administrators, and faculty members. My study will therefore be conducted in the light of quantitatively and qualitatively investigating perceptions surrounding the effectiveness of ERM implementation in HEIs, and as such examining it within for the perspectives of the whole academic process.

MAIN ETHICAL CONSIDERATION(S) OF THE PROJECT (e.g., working with vulnerable adults; children with disabilities; photographs of participants; material that could give offence etc.…):	Because of the special nature and context of the research question, touching on management and institutional integrity issues related to the effectiveness of academic performance and processes, I view participants' consent and reassurance as crucial prerequisites to the execution of my study. I will seek participants' consent using the consent forms for voluntary participation, samples of which are attached to the Proposal draft as Appendices 4, 5 and 6. In these forms the intended study objectives and the constructs, as well as the study design will be explained. All data will be treated as confidential where I will refrain from disclosing or sharing them with any other participants or institutions outside the scope of this study.
DURATION OF PROPOSED PROJECT (please provide dates as month/year):	Should my Proposal Defence be decided and approved in June 2020, I plan to start to expand on my thesis writing and data collection starting from July 2020. According to my proposed study plan, I intend to complete my thesis writing and data collection and analysis by August 2021 to be ready for my thesis submission and defence.
Date you wish to start Data Collection:	Mid July to beginning of August 2020.
Date for issue of consent forms:	15 April 2020 (*Tentative*).

iii. Declaration by the Researcher:

I have read the University's Policies for Research and the information contained herein, to the best of my knowledge and belief, accurate.

I am satisfied that I have attempted to identify all risks related to the research that may arise in conducting this research and acknowledge my obligations as researcher and the rights of participants. I am satisfied that the members of staff (including myself) working on the project have the appropriate qualifications, experience and facilities to conduct the research set out in the attached document and that I, as researcher, take full responsibility for the ethical conduct of the research in accordance with subject-specific and University Research Policy (9.3 Policies and Procedures Manual), as well as any other condition laid down by the BUiD Ethics Committee. I am fully aware of the timelines and content for participant's information and consent.

Print name: *Yaser Abdulrahman Ibrahim*

Signature: _____ Date: _____

*If the research is confirmed as not medium or high risk, it is endorsed HERE by the Faculty's Research Ethics Committee member (following discussion and clarification of any issues or concerns) *…… and forwarded to the Research Office to be recorded.*

I confirm that this project fits within the University's Research Policy (9.3 Policies and Procedures Manual) and I approve the proposal on behalf of BUiD's Research Ethics Committee.

Name and signature of nominated Faculty Representative: _____

Signature: _____ Date: _____

iv. If the Faculty's Research Ethics Committee member or the Vice Chancellor considers the research of medium or high risk, it is forwarded to the Research Ethics Officer to follow the higher-level procedures.

* ***If the Faculty representative is the DoS, the form needs the approval of the Chair of the Research Ethics Committee***.