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The Relationship Between the Levels of Cultural Intelligence and the Ability to Adapt Leadership Style Amongst the Leaders in Abu Dhabi Education Sector

A thesis submitted in fulfilment of the requirements of Durham Business School
for the Degree of Doctor of Philosophy

Submitted by

Ali Aldhaheri

**Durham Business School
Durham University
August 2018**



AUTHOR'S DECLARATION

During the period I have been registered as a candidate for the degree for which this submission is made, I have not been a registered candidate for another award of any other university.

This Thesis has been prepared with full compliance to the Durham Business School regulations for the award of Doctor of Philosophy degree.

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PUBLICATIONS ARISING FROM THIS THESIS

One article arising from this study has been published (Appendix 1) during the course of registration:

Aldhaferi, A., 2017. Cultural intelligence and leadership style in the education sector. *International Journal of Educational Management*, 31(6), pp.718-735.

ABSTRACT

Globalization is inevitable and the inherent result is a work environment that is becoming increasingly diverse. Leaders must meet the challenges of globalization by being adaptable in dealing with the continual pace of change and the cultural diversity of their followers. Internationalization of education and the mobility of students and staff increase pressure on educational leaders to deal with diversity, thereby outlining a good context for understanding these converging factors. Cultural Intelligence (CQ) is “*motivated by the practical reality of globalization in the workplace*”, whereas, the Full Range Leadership Model measures leadership types using the Multifactor Leadership Questionnaire (MLQ). Both of these two concepts, and leadership adaptability define the scope of this study. This research focused on school leaders, and aimed to estimate their CQ, identify their predominant leadership style, and to understand the relationship between CQ and their ability to adapt their leadership style. The Abu Dhabi education sector is amenable to an investigation of the links between CQ, leadership style, and adaptability. Focus groups were held in order to develop questions for a quantitative instrument measuring leadership adaptability. An analysis of the leadership adaptability scale found it met expectations as a survey instrument. The CQ instrument was further validated in the UAE, and has been translated into Arabic. School leaders in Abu Dhabi exhibit high levels of CQ, leadership adaptability, and predominantly demonstrate a transformational leadership style. Significant relationships were identified between transformational leadership style and CQ, and between CQ and leadership adaptability. The implications of this research are far reaching as they highlight the interconnection between the factors of CQ, leadership style, and leadership adaptability in a UAE education context. Further, they present a positive picture of the Abu Dhabi education sector, which is undergoing a period of modernisation in order to be considered world leading and to develop a knowledge based economy.

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CHAPTER 1: INTRODUCTION

Many of the challenges faced by 21st century leaders can be attributed to increasing globalization which in turn is leading to greater diversity in the workforce (Ang, Van Dyne, and Koh, 2005). Globalization is a complex issue with social, political, and economic implications that go beyond individual countries and societies. It has prompted the need for experiences and skills in relation to working in culturally diverse settings as the cultural composition of work teams can have both positive and negative impacts (Ng et al, 2011). Hence, there is a strong demand for leaders who have the necessary skills required to lead culturally diversified teams (Groves & Feyerherm, 2011; Ang et al, 2011).

Whilst globalization may have a more significant impact on government, business and military, it is also becoming an important influence in the realm of education. Educational institutions can be considered to be a microcosm of the globalization that is occurring throughout the world (Keung and Rockinson-Szapkiw, 2013).

Like any institution, the education sector cannot be successful without a leadership team capable of leading it to its success. However, the impact of educational leadership has more at stake than other institutions – it impacts the development of the country, its people and its position on the global scale.

The topic of educational leadership and its impact on a country's ability to compete globally has increased in importance in different parts of the world (Iskander, Pettaway, Waller & Waller, 2016). Bottery has even called the development of educational leaders “a matter of extreme national concern” (Bottery, 2004).

Countries such as Canada, the United Kingdom, Sweden, USA, Singapore, Hong Kong and Australia seem to agree with Bottery's assertion. These nations have focused their attention and resources on the development of effective educational leadership (Moorosi & Bush, 2011).

These countries have made developing their educational leaders' capacity and competency a priority, using measures such as performance benchmarking and adopting universal performance standards in an attempt at reform.

1.1 Rationale for Study

Regardless of an organisation's location in the world, the work environment is becoming increasingly more diverse. It is also the case that some individuals are more effective than others when working in multicultural environments (Crowne, 2008). Organisations that understand this dynamic often require their workers to have effective communication and leadership skills, thereby achieving more positive outcomes in multicultural situations. Hence, globalization is demanding new leadership competencies as effective leadership is considered by many authors to be essential in order to manage this diversity (Sprietzer, McCall and Mahoney, 1997; McCall, 1998; Caligiuri and DiSanto, 2001).

Globalization has led to an increase in the numbers of people moving between countries, resulting in various cultures from across the world coming together. This is especially apparent in Abu Dhabi where globalization is an integral factor in the cultural diversification of the Abu Dhabi population. This diversification is reflected in the make-up of its education system and schools; both staff and pupils alike represent various countries and cultures from across the world. This diversification leads to challenges for school leaders, and requires them to respond with an understanding of cultural differences and have the ability to adapt to meet the needs of situations that are characterized by cultural diversity. Therefore, in

addition to high levels of intellectual intelligence (IQ) and emotional intelligence (EQ), twenty-first century school leaders also need cultural intelligence (CQ) to navigate the unique complexity of a global environment.

A construct which has been especially “*motivated by the practicality of globalisation in the workplace*” is Cultural Intelligence (CQ), which can be described as a means to gauge an individual’s capacity to operate and manage in multicultural environments (Ang & Van Dyne, 2008). A leader with cultural intelligence will exhibit a range of flexible behaviours that allows them to more quickly adjust to a multi-cultural environment (Ang & Van Dyne, 2008). In a school setting, leaders who possess high levels of cultural intelligence are in a better position to adjust and adapt their leadership style to their environment (Keung, 2011). It follows then that if high CQ does indeed enable a school principal to overcome shortcomings in the understanding of different cultures, then a principal whose leadership style reflects this skill should be more positively engaged with stakeholders.

Individuals with high levels of CQ have the ability to gather pertinent information, make conclusions based on it, and then appropriately respond to cultural cues of a host region with cognitive, emotional or behavioural actions (Earley and Ang, 2003). Such intercultural competencies are also likely to increase an individual’s adaptability and reduce any miscommunication of role expectations. Past research has identified a positive relationship between CQ and adaptive leadership; Ang et al. (2007) found that individuals who are more aware of their environment are better able to understand and practice culturally appropriate role expectations. They are then more capable of accordingly adjusting their behaviour. Ang et al. (2007) explains that such individuals demonstrate a more accurate understanding of role expectations and behaviours in diverse cultural settings.

Earley and Ang (2003) explain that CQ has a direct effect on this adaptability because it can support individuals to more readily adapt to their host environment. By contrast, a negative link between behavioural CQ and leadership adaptability is likely to be seen in situations where a leader does not apply adaptive behaviours that suit alternative cultural environments.

However, despite the obvious link between CQ, leadership style and leadership adaptability, there is limited empirical evidence in the literature highlighting the practices and characteristics of school leaders in relation to the concepts of CQ, leadership style and leadership adaptability in general and in the Emirate of Abu Dhabi in particular. In fact, of the many studies found, there was only one which focused on UAE and none for all Gulf Cooperation Council (GCC) countries combined.

As CQ is a comparatively young construct there is still scope for the addition of empirical evidence to the nomological network. Extending the concept of CQ to a relatively unexplored geographic region Arab World (Middle East in general and Abu Dhabi, UAE in particular) and sector (Education sector) will further the on-going validation efforts of CQ. There is limited evidence regarding the core issues of CQ, leadership style and leadership adaptability in general and in a UAE context in particular. This study, will address these gaps in the literature and attempt to link the established theories of CQ, leadership style and leadership adaptability in general and particularly among the school leaders in the emirate of Abu Dhabi.

The following sections outline the research aim, objectives, research questions and hypotheses, and the chosen methods and approach, the rationale for which are developed as part of the literature review and/or methodology chapters, but are stated here in order to guide the reader. Also outlined is the significance of the present study, and an overview of the remaining chapters of this thesis.

1.2 Research Aim, Objectives and Questions

The aim of the research is to understand the relationship between the levels of cultural intelligence and the ability to adapt leadership style amongst the leaders in the Abu Dhabi Education Sector.

The research objectives of this research are:

1. To estimate the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi.
2. To identify the predominant Leadership Style of school leaders in the Emirate of Abu Dhabi.
3. To estimate the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi
4. To establish the degree to which Cultural Intelligence, Leadership Style, and Leadership Adaptability are related.

Objective 1: To estimate the level of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi

The challenges faced by 21st century educational leaders differ from the past. Increased diversity of students within educational institutions indicates that leaders need to have cultural intelligence in addition to global awareness (Thomas, 2006). A school principal with high levels of CQ should be better equipped to deal with and communicate to staff and students from diverse cultures. They should be able to target specific issues, and formulate appropriate responses in order to close any gaps in understanding that occur due to cultural differences among staff and students.

There have been no previous large-scale research efforts to measure the CQ levels of leaders in the UAE education sector. This research objective will enable the researcher to establish a CQ baseline in the UAE that can be utilised in all future research and allow for further validation of the CQ scale within a new sector and new location, as previously called for by Ang et al. (2010).

For this objective the following research question and hypothesis will be tested:

Research Question 1: What are the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi?

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are not significantly different from the normative CQ level

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are significantly different from the normative CQ level

Objective 2: To identify the predominant Leadership Style of school leaders in the Emirate of Abu Dhabi

There are a plethora of leadership models and styles, and many have proven to be effective. Northouse (2016) describes how intelligence is positively linked to leadership, and how evidence was found to support the statement that leaders tend to have higher intelligence than non-leaders. When the situational aspect of leadership is considered, it can be appreciated that cultural intelligence is relevant to leaders who find themselves in culturally challenging situations. It can be argued that cultural intelligence and intelligence more generally have a role to play in the leadership process in culturally diverse situations (Northouse, 2016).

Multi-cultural organisations require leaders to examine their own personal values and beliefs derived from their personal culture, customs, and norms within the context of the cultures which are exhibited by their followers (Forsyth, 2015). A number of researchers undertaking

investigations in the area of cultural intelligence have brought to the fore the issue of leadership and the influence of cultural intelligence on successful leadership processes within organisations. For example, Livermore (2010) and Mannor, (2008) both argued that CQ increases leaders' abilities to assess culturally diverse work settings, thereby enabling them to adapt their leadership style accordingly. Livermore (2010) goes further to state that leaders with advanced capabilities in CQ "*greatly contribute to leadership effectiveness and performance outcomes' in culturally diverse teams*" (p. 41).

However, there has been relatively limited research that identifies the leadership styles being applied in the UAE's education sector. As a consequence, the second research objective is to identify the predominant leadership style of Abu Dhabi school leaders. It is expected that this will develop insights into a new sector, within a new geographical location and provide a necessary baseline for understanding predominant leadership styles among education leaders in Abu Dhabi.

For this objective the following research questions and hypothesis will be tested:

Research Question 2: What is the predominant leadership style of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level.

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level.

Objective 3: To estimate the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi

Leadership adaptability relates to a leader's ability to modify their thoughts and behaviours in order to make correct responses in decision situations characterised by change (Luu, 2017). The work environment is always changing and is also under the influence of other factors such as globalisation, and increased cultural diversity. Leaders must be able to demonstrate a flexible and innovative approach to these ever changing situations. It is evident in the literature that leaders might adapt and change their leadership style, depending on the working environment or particular situation that presents itself.

Despite the obvious increase in leadership pressures, the quantity of academic and professional research focused on the issue of adaptive leadership remains limited in scope. As the impact of these leadership pressures increases the need for research in the field is becoming more essential. Non existence of leadership adaptability scale has prompted the need to develop a new scale as part of this research.

For this objective the following research questions and hypothesis will be tested:

Research Question 3: What is the level of Leadership Adaptability (LA) of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of Leadership Adaptability for school leaders in the Emirate of Abu Dhabi is not significantly different from the Leadership Adaptability scale midpoint of 4.0 (moderate LA).

H₁: The average level of Leadership Adaptability for school leaders in the Emirate of Abu Dhabi is significantly different from the Leadership Adaptability scale midpoint of 4.0 (moderate LA).

Objective 4: To establish the degree to which Cultural Intelligence, Leadership Style, and Leadership Adaptability are related.

Research has shown that there is positive relationship between adaptive leadership and cultural intelligence. Work by Ang et al. (2007) showed that individuals are better at understanding and enacting culturally appropriate role expectations where they are more aware of the environment they are in (meta-cognitive CQ) and are able to accordingly adjust their behaviour (behavioural CQ). These individuals demonstrate a more accurate comprehension of role expectations and behaviours in culturally diverse situations (Ang et al., 2007).

A leader with high cognitive CQ will be capable of identifying clues and insights about a culture, and using these observations to form an appropriate response. School leaders high in CQ are better able to adjust and adapt their leadership style in the host culture environment.

For this objective the following questions and hypothesis will be tested:

Research Question 4a: Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style?

H₀: There is no relationship between Leadership Style and Cultural Intelligence

H₁: There is a significant relationship between Leadership Style and Cultural Intelligence

Research Question 4b: Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence?

H₀: There is no relationship between Cultural Intelligence and Leadership Adaptability

H₁: There is a significant relationship between Cultural Intelligence and Leadership Adaptability

1.3 Research Methods and Approach

This research takes an empirical approach, and the population of interest is school leaders (with title of: Principal, School Director, or Head of School) of all academic, locally accredited private and public schools in the Emirate of Abu Dhabi.

The nature of the phenomena under investigation warrants a mixed methods approach. These three complex, relatively new, and difficult to measure constructs are not easily captured by a simple quantitative scaling approach alone. Therefore, this research utilised both qualitative and quantitative methods. Initial focus groups are held with school leaders in order to develop the understanding of the UAE educational context, and facilitate the generation of additional leadership adaptability questions used in a quantitative questionnaire. The quantitative questionnaire is distributed to all school leaders identified in the sample.

A number of statistical techniques are employed in order to test the hypotheses. Based upon the results of this empirical research, a full set of conclusions, recommendations and implications are developed and explained.

1.4 Significance of Study

The analysis of academic literature and theoretical foundations provides an overview of many of the key areas of interest with regards to the UAE education sector, CQ, leadership style, and leadership adaptability. The data analysis chapter extends the research beyond stating the levels of each of the three areas of interest, to providing a picture regarding the relationship between CQ, leadership style and leadership adaptability among school leaders in general and in a UAE

context in particular. This type of empirical insight is not identified in existing literature, and so this initial study delivers an addition to the body of knowledge.

The results from this study offer a number of both theoretical and practical implications: The UAE's Ministry of Education recognizes that as things change rapidly in a global economy, this brings with it uncertainty. Therefore, the ability to develop the skills needed to navigate in a complex, constantly evolving and uncertain world is becoming more and more paramount. From a theoretical perspective, there is a great need to not only add to the field of CQ but also to add to the body of research in the area of CQ and its relation to leadership and the education sector. CQ is a comparatively young construct and therefore any addition of further empirical evidence testing CQ will be valuable (Gelfand, Imai & Fehr, 2008, Ott and Michailova, 2018). Extending the concept of CQ to a relatively unexplored geographic region (Middle East in general and Abu Dhabi, UAE in particular) and sector (Education sector) will further the on-going validation efforts of CQ, as called for by Ang et al. (2007).

Yukl and Mahsud (2010) argued that many of the components of adaptive leadership have not been examined fully and stated that more research is required in order to understand the many aspects of adaptive leadership. In particular, they call for more understanding in relation to the skill set of the adaptive leader, how well they recognise changes in the environment around them, and the conditions which require them to adapt their leadership style. This research answers this call, provides empirical findings regarding leadership adaptability and the development of a new scale.

From a leadership perspective, the link between the level of CQ, leadership style and ability to adapt leadership behaviour in a particular context or setting will be of great importance to the field of CQ and leadership studies. All of the insights generated in relation to CQ, leadership style and leadership style adaptability will provide a useful baseline from which to initiate

suitable training and development programs for UAE school leaders in order to help them improve their skills and meet the challenges ahead.

1.5 Organisation of Thesis

There are six chapters in this thesis, as follows:

Chapter One – Introduction provides a brief overview of the concept of cultural intelligence, the factors which lead to and influence cultural diversity and the leadership implications which arise as the result of cultural diversity. This leads to a research aim, objectives and questions which effectively frames the study.

Chapter Two - Literature Review - provides a comprehensive review of the literature relating to the field of CQ, leadership and leadership style adaptability. This review covers the established links between CQ, leadership, leadership style and leadership adaptability. The context of the UAE is described to include a description of the demographics of the country as a whole, and the education sector in particular. It concludes with knowledge gaps, research questions and hypothesis development.

Chapter Three - Research Methodology - describes the research design and data collection methods, the theoretical foundations and practical issues of their employment in this research, and the relevant theories providing a justification for their choice.

Chapter Four – Data Analysis - presents the data analysis and findings resulting from this study. The chapter includes an overview and explanation of the qualitative data analysis resulting from the focus groups, and also of each of the statistical techniques used to analyse the quantitative data resulting from the questionnaire, and test the hypotheses.

Chapter Five – Discussion - covers each of the findings against the objectives and research questions identified, viewed in the context of the literature presented and methodology employed.

Chapter Six - Conclusions and Implications - summarises the main conclusions of the thesis, highlighting the value of the research findings, both theoretically and practically. The chapter discusses the limitations of the study, and the implications of the study for future research.

CHAPTER 2 – LITERATURE REVIEW

2.1 Introduction

The chapter begins by reviewing the challenges around globalisation and research context (2.2), followed by an overview of the UAE education sector (2.3). This is followed by a summary of the theoretical and empirical studies relating to culture and intelligence (2.4), cultural intelligence (2.5) and leadership (2.6) aiming to tie together the concepts of cultural intelligence, leadership style, and leadership adaptability. Gaps in the existing body of knowledge are identified and based upon these gaps, the rationale for this study, a set of research questions and associated hypotheses are developed (2.8).

2.2 Challenges of Globalisation on Leadership and Research Context

Extraordinary technological advancement has fuelled the rate of globalisation and has resulted in organisations and individuals operating in culturally diverse environments, in which they are expected to function and perform efficiently (Solomon and Steyn, 2017; Alon, Boulanger, Elston, Galanaki, De Ibarreta, and Meyers, 2016). One facet of the globalisation challenge is the need for organisations and their leaders to adapt to diverse and multicultural operating environments (Froese, Kim and Eng, 2016). As an added layer of complexity, it is important that a leader adopts a global mind-set that can understand cultural differences and their potential impact on a business. Hodges and Burchell (2003) suggest that highly competitive global business environments require leaders to acquire and exercise the ability to understand situations to effectively communicate. At the same time, cultural values have been shown to have a marked effect on leadership concepts, values, behaviours and styles.

Froese et al. (2016), stated that many organisations are increasingly becoming more globalised, and to stay successful, they must be prepared to handle the challenges of culturally-diverse workforces and foreign markets. Therefore, no matter where a business organisation is located in the world, the work environment is becoming increasingly more diverse. It is a fact that some individuals are better than others at working in multicultural situations, and organisations that understand this want their workers to have effective communication skills for intercultural environments (See Appendix 2 for more information about the challenges of globalisation on leadership and culture in organisations). There are two reasons why business organisations need a high degree of cultural awareness. First, it is necessary to establish a global presence so they can compete in the international marketplace, and second, it is needed in their organisation because workplace demographics are becoming more diverse. Due to the effects of globalisation, organisations are taking on many new forms. With this comes an increase in interdependence across countries, which often leads to the creation of multicultural teams at each level of the organisation (Ang and Van Dyne 2008).

Whether we work in our native homeland or a foreign country, we are all affected by globalisation. Countries, economies, industries, and organisations cannot operate under traditional boundaries any longer (Janssen et al.; 2008). Many factors have led to the acceleration of globalisation: the expansion of international migration, the privatisation of state enterprises, the restructuring of organisations, the growth of multinational organisations, and the increase of international trade. Another factor which has led to these changes is the overpowering advances in technology and communication which transcend time and distance. Transactions can be done instantaneously from almost anywhere in the world (Caligiuri, 2006). With the e-commerce model, even small businesses can now compete globally.

Nowhere is the presence of a globalised work environment more obvious than in the Middle East (and in Asia to some extent) . The very name “Middle East” suggests that Arabia is in the centre of two broad world cultures, the West and the East.

Research Context

The Arab region is unique in its geographical positioning in that its global centrality promotes trade and interaction with all corners of the globe. Its abundance in natural resources has resulted in the region being able to produce and supply 30 % of the world's crude oil and 17% of the world's gas. The region also holds 55% of the world's crude oil reserves and 28% of the world's gas reserves making the Arab world a strategically pivotal region from a global economic perspective. The Arab region is also characterized by a young workforce and one of the world's fastest growing population rates , which again adds to the lure of the Arab region as an economic hub (AMF, 2016).

Despite the many geographic, demographic and economic advantages for organizations operating in the Arab region, there is still no consensus as to the most suitable way to manage and lead organizations and people, as well understanding the many facets of leadership itself from an Arab world perspective. While there is a plethora of leadership and management literature from a western perspective, there is very little research which focuses on the Arab world context in particular, taking into consideration the impact of culture, values, and religious beliefs, in what is a diverse population. Istizada (2017) places an urgent call for research that is tailored towards the approximately 420million, Arabic speakers across the 22 countries classified as being in the Arab world. In particular, they call for the development of tools which are context specific for this region.

In particular, the UAE is a country in the Arab world that embodies the diversity that exists in the entire region. Despite its prosperity and staggering rate of economic development, there still remains very little empirical evidence to support the many factors that can impact on individuals, groups, and organizations in this country. To this end, the UAE has been chosen as a country, which is sample of the Arab region as a whole.

The United Arab Emirates is an international business environment and the trend of globalisation is broadening as it becomes a hub for international business in many sectors, such as alternative energy, finance, trade, and tourism (global.atradius.com, 2014).

With the continuing development of the UAE's knowledge economy, and the country's increasingly important role on the world stage, there is a growing need to prepare business leaders for local and global assignments.

2.3 The United Arab Emirates (UAE) and its Education System

The United Arab Emirates (UAE) is a constitutional federation of seven emirates, Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Qaiwain, Ras al-Khaimah and Fujairah. It was formally established on 2nd December 1971 (Abu Dhabi Chamber, 2014). See Appendix 3 for more information about UAE political context.

2.3.1 UAE Demographic Context

It was during the first decade of oil exports that large numbers of migrant workers, mainly laborers from India and Pakistan, entered the UAE. This rapid population increase was largely a result of the rapid socio-economic development. However, the onset of 'the oil crisis' which took place in October 1973 and January 1974 signified the real growth in population. Oil prices quadrupled, as did the revenue for oil producing countries and so OPEC members had a lot

more disposable funds that could be pumped into new and more ambitious infrastructure and social development projects. Figure 2.1 indicates the extent of the demographic changes that have occurred in the UAE since the 1950's. Figure 2.2 indicates the overall increase in expatriate population which has reached a peak of 88% of the total population in recent times (UAE National Bureau of Statistics).

The population of the UAE in 2018, as per latest World Bank estimates, is 9.543 million. The last updated records from the UAE were published by the Federal Competitiveness and Statistical authority in December 2016 estimating the population at 9,121,167. Of these, nearly 88.52% are classified as expatriates. There are more than 202 different nationalities in the UAE (Global Media Insight, 2018).

The UAE continues to witness rapid population growth (as shown in Figure 2.1), which is primarily driven by the influx of expatriates. In terms of the distribution of the population, 70% of the total UAE population resides in the emirates of Abu Dhabi and Dubai. Of the approximately 1 million UAE Nationals that live in the UAE, 60% also reside in either Abu Dhabi or Dubai (UAE Education System Report, 2013).

In regards to the age distribution of the population, *Table 2.1* shows that nearly 40% of UAE Nationals are below the age of 15. This statistic has implications for the expansion of the productive capacity of the nation and is undoubtedly a big challenge for the UAE. It has been predicted that the UAE National population will increase rapidly in the next 21 years based on current growth rates of 3.28% per year (UAE Education System Report, 2013). Overall, the UAE is ranked ninth in the world in terms of net migration rate due to increasing numbers of workers from many countries, the main ones being India, Philippines, Indonesia, Australia, and the USA, (World Factbook, 2018). The downside of a high population growth is the resultant pressure that is placed on the education and labour markets, however, it also allows leaders the

opportunity to successfully align the education system with economic policies in order to safeguard and encourage employment generation (UAE Education System Report, 2013).

The following figures and tables have been adapted from the UAE Education System Report (2013) and the World Factbook, 2018.

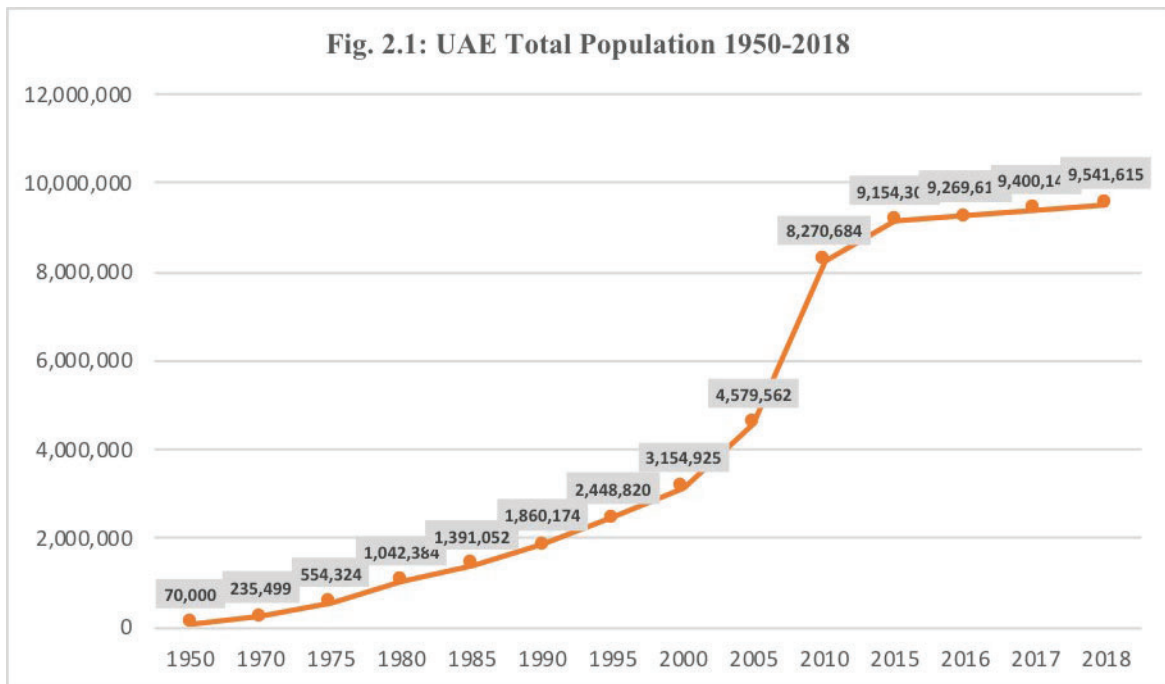


Figure 2.1 UAE Total Population 1950-2018

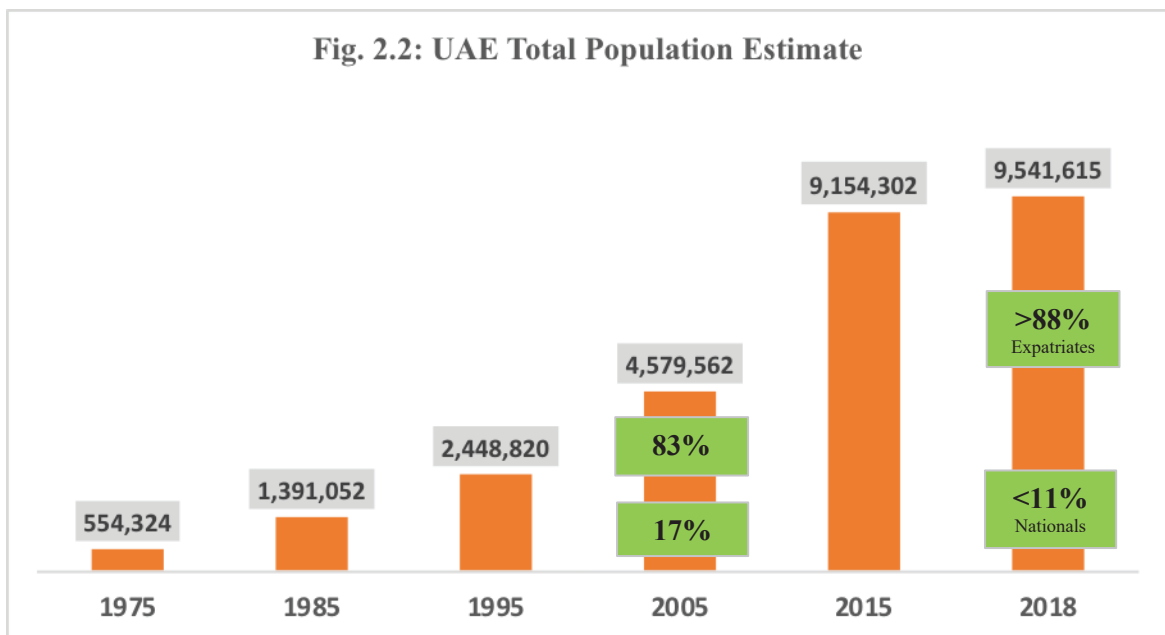


Figure 2.2 UAE Total Population Estimate

Table 2.1 National Population by Emirate - 2010 Estimate*

Percentage Distribution of Nationals by Emirate							
Abu Dhabi	Dubai	Sharjah	Ras Al-Khaimah	Fujairah	Ajman	Umm Al-Quwain	Total Emirati Population of the country's total
404,546	168,029	153,365	97,529	64,860	42,186	42,186	947,997
43%	18%	16%	10%	7%	4%	2%	

* The 2010 estimate is the last official estimate done per Emirate. All other census data available are available for the UAE as a country and not per Emirate.

Table 2.2 National Population by Age Group

National Population by Age Group								
Age	0-14	15-24	25-34	35-49	50-59	60-69	69+	Total
Percentage	38%	26%	16%	12%	4%	2%	2%	947,997
Total	360,203	242,651	152,715	114,037	39,604	23,329	16,558	

2.3.2 UAE Education System

All over the world, developing and developed nations recognize that education is the key to a country's success and ability to compete on a global scale. The United Arab Emirates (UAE) is no exception, and has long viewed an educated population as the key to competing in a diverse and Global economy (Alhebsi, Pettaway and Waller, 2015).

UAE education sector is relatively young when compared with other systems around the world. The development of an education system began in 1962 and really took off after the formation of the federation in 1971. In less than 40 years, a public national education system has been developed which is similar to those developed by western governments in over 100 years (Kirk, 2010). As a result, the government has had to quickly develop an education system that can withstand the rate

of development of the country. This has led to the adoption of many foreign models and curriculums, giving the students more choice while also meeting the demand for capacity quickly (Kirk, 2010). However, while this has helped in the short term, the UAE education system is now undergoing reform with the ultimate aim of creating an indigenous education model that is more tailored to the diverse needs of the country (See Appendix 4 for Education Sector challenges and budget).

In the UAE, education is a free public service for all nationals from primary, secondary through to tertiary levels. The UAE public education sector is used primarily by nationals, yet many of the staff are expatriate, resulting in a chronic shortage of Emirati teachers. The lack of Emirati teachers is currently a major challenge to the public sector (Kirk, 2010).

Parallel to the public-school system is the private school system which is predominantly made up from expatriate students and staff, although many national students are now attending private schools as they are perceived to be of higher quality. The demographic of students and teachers varies greatly between both private and public sectors, and there are various challenges relating to diversity such as language barriers, cultural and religious differences and gender imbalances (Kirk, 2010).

In 1962, there were only approximately 20 schools serving approximately 4000 students, most of which were males. At this time, post-secondary education did not exist. Even upon establishment of the UAE in 1971, formal education was only available in the bigger cities and there were only 28,000 students across the whole country. As a result, adult literacy rates were low at 54% among men and 31% among women (The Ministry of Cabinet Affairs. UAE Vision 2021). In 1972, Federal Law No. 11 was passed, which made education compulsory at primary level and also was made free for UAE national at all levels. This important decree was the first step in making education accessible for all. In order to facilitate this education development, several large

infrastructure projects were initiated which included the UAE University, the first Higher Education establishment in the UAE, and the Higher colleges of Technology which today has 17 branches across the country. As of 2018, there is a total of 76 higher education institutions with a combined student body of 103,431, enrolled across 644 accredited academic programs (Commission for Academic Accreditation, 2018).

Today, the UAE education system has evolved into a four-tiered structure (Figure 2.3). The UAE's primary and secondary education system is comprised of three distinct cycles: cycle one includes five years of elementary education; cycle two covers grades six to nine; and cycle three comprises of grades ten, eleven, and twelve. Education is compulsory by law until grade 12. (The UAE Education System Report, 2012).

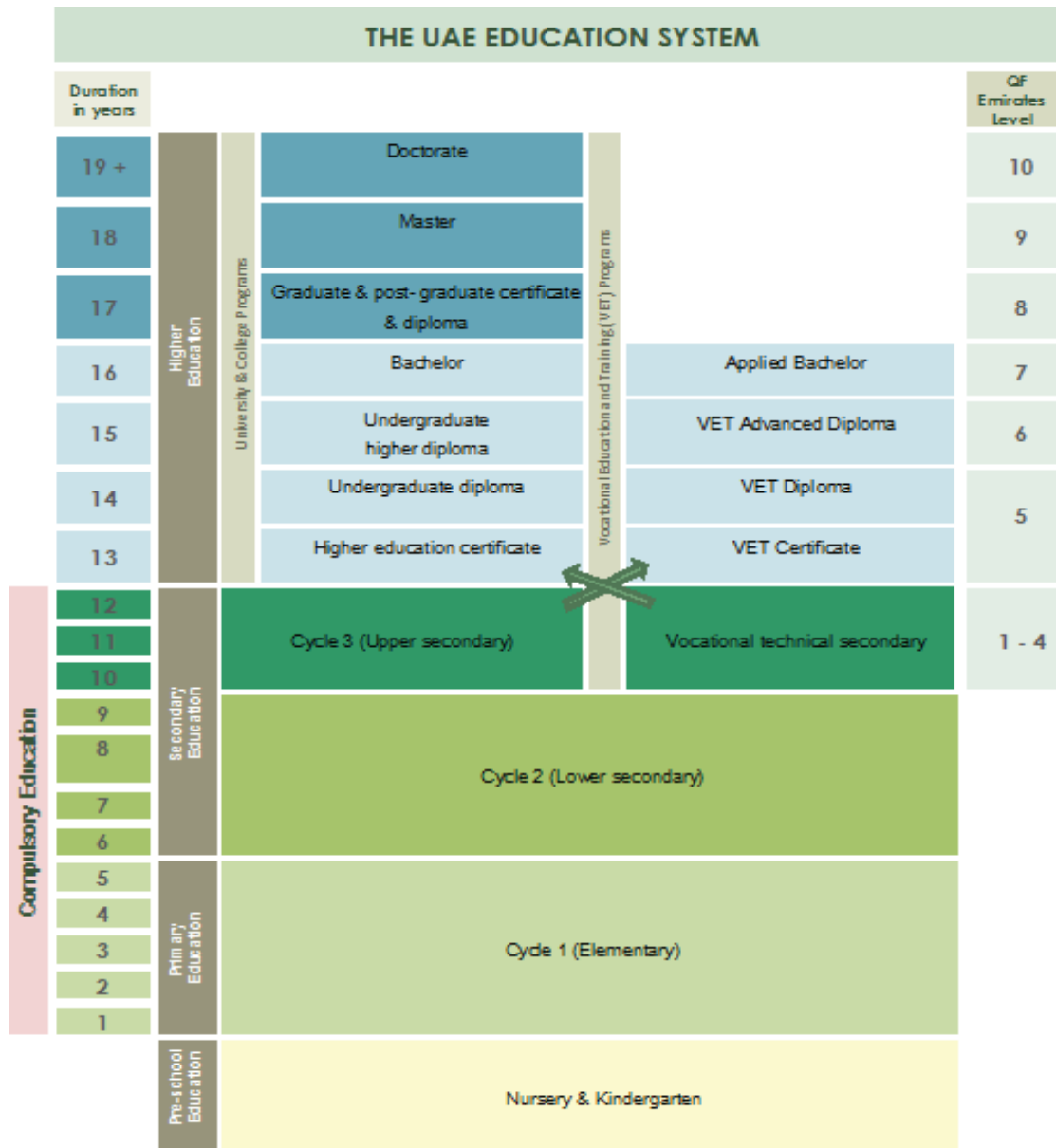


Figure 2.3 UAE Education System. Taken from the UAE Education System Report, 2012.

2.3.3 Key Challenges facing the UAE Education Sector

The challenges faced by the UAE education system as it faces reform have been to “*encourage technical knowledge and innovation in the curriculum, build educational capacity, introduce international quality assurance frameworks to raise standards, and measure performance*” (The UAE Education System Report, 2012, p. 17). Accountability is an important challenge and there have been huge efforts to introduce a more accountable system for all levels of education.

Another important objective of educational reform is to develop new systems that can deal with external factors such as globalisation, the IT revolution, and the development of a knowledge economy, as well as factors such as improving quality in order to prepare students for the modern world (The UAE Education System Report, 2012).

A critical and unique aspect to the development, is the desire to create a world class education system that also retains respect for the Abu Dhabi’s cultural heritage. Great emphasis is being placed on developing curricula that are based on the social, cultural, political and religious systems prevailing in the UAE. A key challenge, relates to school leaders as they try to meet the needs of many different nationalities of students and staff while also implementing the government strategy aimed at the indigenous population (ECSSR 2012). In fact, this is a key driving force behind this research as the sheer diversity of the UAE means that a one size fits all curriculum is not going to be feasible. Those responsible for schools in the UAE have a difficult task to cultivate a curriculum and educational environment that is going to meet all the needs of the various cultural groups.

2.3.4 Conclusion

Since its establishment, the United Arab Emirates education system has experienced considerable improvements. Indeed, the rate of growth has been phenomenal and without comparison anywhere

else in the world. At the heart of this growth is the government who have continuously focused its efforts on the greater good of the country and its people. There has been an ambitious overhaul within the education sector, in terms of increased investment in the areas of infrastructure, administration, and delivery systems. Education leaders have forged partnerships with other educational leaders worldwide, with the main aim being to learn and implement best international practices while trying to align them to the national goals that support the needs of the country and its people. These developments will go some way to achieving the long-term goal of transitioning the UAE to a “knowledge-based, sustainable and diversified economy” (The UAE Education System Report, 2012).

However, the issue of how all the various cultures in the UAE are integrated into the highly fragmented educational sector will continue to be a challenge to educational bodies. The UAE’s Ministry of Education recognizes that as things change rapidly in a global economy, this brings with it uncertainty. Thus, the ability to develop the skills needed to navigate a complex, constantly evolving and uncertain world is becoming more and more paramount (Al-Suwaidi, 2011).

Therefore, this research focuses on the challenges faced by educational leaders in the UAE (mainly the Emirate of Abu Dhabi), and will shed light on the importance of developing strong and effective educational leadership (with cultural capabilities) to the future of the UAE’s growth, development and prosperity, as well as the multiple factors which affect and influence the nation’s ongoing reform to reach this goal.

2.4 Culture and Intelligence

In the previous section, it was identified that the UAE education system is undergoing a rapid period of change in order to bring its standards up to higher performing education systems from around the world. At the same time, globalisation is changing the make up of the classrooms and staffrooms, with a greater proportion of both staff and students from non-UAE countries. If the UAE is to meet its targets with respect to the quality of its education system, whilst managing an ever more diversified population of staff and students, its leaders will need to exhibit a broad range of attributes.

This section focusses on the constructs of culture, intelligence, and CQ; some of the key attributes a school leader will require. The construct of CQ was developed within a framework of culture and other intelligences, namely social intelligence, and emotional intelligence (Ang and Early, 2003). In order to fully understand the significance and application of this relatively new concept, it is important to understand culture and intelligence theories separately. This section begins by introducing culture (section 2.4.1), intelligence (2.4.2) and cultural intelligence (2.5)

2.4.1 Culture

It is evident from the literature that culture is a complex and broad term which relates to a person's individual attitudes, values and beliefs but also covers groups of people in society and influences every aspect of a person's life (Ang and Early, 2003; Livermore, 2010).

Hofstede (1992), one of the most prolific theorists in the field of cultural anthropology, defined culture as "*the collective programming of the mind which distinguishes the member of one category of people from another*" (Hofstede 1992, p. 5). In this statement, culture is considered to be something that is learned as we navigate through childhood through all our collective

experiences. Hofstede (1992) also details a three-tiered theory for culture based on another of his definitions that “*each person’s mental programme is partly unique and partly shared with others, thus distinguishable at three levels, namely the universal, collective and individual levels*” (Hofstede 1992, p. 17). The universal level is made up of people’s biological make up and behaviour and is common among most of the world’s population. The collective level is related to language, eating habits, signs of respect etc. that are specific to a particular group of categories of people. The individual level refers to the personality and unique traits of individuals (Hofstede, 1992).

Culture is also a set of experiences that are common and shared within a group of peoples; the values, attitudes and behaviours that are shared within a particular culture give them a definable identity among the group (Thomas & Inkson, 2003).

Culture can also refer to a set of rules which people abide by in their daily life and that are passed down through generations. These rules are broad and include people’s attitudes, values, communication styles, patterns of thinking and behaviour (Myers, 1996). Earley, Ang & Tan (2003), who are the founders of the cultural intelligence construct defined culture as the “*many ways in which individuals think, feel and react to various situations and actions that are gained and shared through the use of symbols and artefacts*” (p. 20).

2.4.1.1 Cultural Diversity and Multiculturalism

The concept of cultural diversity is well defined in the literature and has benefited from both laboratory and field study approaches. According to Cox (1994) cultural diversity can be described as one social system which contains groups of people with clearly different and significant cultural connections. The concept of diversity specifically relates to the differences which occur between groups of people that can be used to distinguish between them. These

differences which exist between groups of people can be due to factors such as age, gender, ethnicity, class, disability and sexual orientation.

It is still evident that cultural diversity is still considered at the national cultural level (Mor Barak, 2014). The terms diversity management and cross-cultural management are therefore used interchangeably when it comes to signifying cultural diversity in the workforce, although there is a preference to use the term cross cultural management when dealing with a diversity among national cultures. It has been suggested in the literature that there has been a slight shift in the study of diversity management which is being propelled by better cross-national alliances thereby providing the opportunity for new insights in specific contexts.

The concept of diversity in the workplace is described as being a reflection of the differences which exist among society in relation to demography, social and cultural components, within the context of the workplace (Gotsis and Korte 2015). Gotsis and Kortezi (2015) further emphasise the need to consider the context in relation to cultural diversity as individual and group identities will vary depending on the cultural context.

Cultural diversity is now a critical aspect of many workplaces and has its importance has increased in line with globalization (Aoun & Gibeily, 2007). There are now fewer barriers to the flow of ideas, products, services, skills and manpower. Previously, organisations worked within a set structure and geographical reach. Now, they must be able to work effectively within a global economy which means that interactions with other cultures are a daily occurrence.

Thus, what is the impact of cultural diversity in the workplace? People from different cultures will bring a multitude of social factors to the organisation which may impact other employees

and the organization as a whole. While there may be many similarities among cultures, there will also be many differences which may or may not be related to ethnicity, race, religion etc. This diversity in the workplace can be extremely advantageous to the company as they may benefit from new ways of thinking, new observations, improved innovation, creativity and problem-solving abilities. Diaz-Uda, Medina & Schill (2013) argue that these advantages occur to a lesser extent in more uniform working environments and that overall a diversified workforce does encourage more positive work outcomes.

2.4.1.2 Multiculturalism

According to Kumar, Anjum and Sinha (2011), any situation that includes culture can be described as being multicultural. Flowers and Richardson (1996) defines multiculturalism as being a social and intellectual concept with diversity as a key component, while Watson (2010) propose that multiculturalism is a variety of “cultural actors” all vying to find their way. More simply put, Arredondo, (2008) regards multiculturalism as being in a position to truly understand one another. Arredondo (Ibid.) goes on to identify the concept of multicultural understanding as a key component of multiculturalism. Multicultural understanding is where a person is fully aware of their cultural self as well as being able to understand other cultures and form meaningful and courteous associations with people and groups from other cultures.

2.4.1.3 Multicultural Leadership Competencies

The impact of globalization has resulted in the need for all leaders to learn the necessary skill set or leadership competencies to help them be successful in their more culturally diverse work environments and indeed leaders must “evolve” in the face of globalization (Abu-Tineh, et al., 2008). Globalization has not only effected the many industries around the world but also

greatly impacted the fields of leadership and leadership styles all within a multicultural setting (Thorn, 2012). Abu Tineh et al (2008) states that a typical leader in a multicultural global organisation must consider themselves to be within a learning community and must be able to focus on the “vision, structure, and strategies” of the given situation. Such complexity requires the leader to have the leadership competencies necessary to guarantee success.

The study of multicultural leadership competencies is yet underdeveloped and many challenges remain. Pauliene (2012) states that the confusion lies in the fact that leadership is made up from many interrelated competencies and not one single competency holds the key to leadership success. Connerly & Pedersen (2005) and Abu-Tineh et al., (2008) both agree with the assertion that the concept of leadership competencies are extremely complex and that those organisations who work in international or multicultural settings deal with complexity on a daily basis.

Overall, it can be argued that there are distinct differences between cultural diversity and multiculturalism. Cultural diversity is wide ranging and relates to the many differences which make up the people in an organisation. These include differences in race, ethnicity, gender, religion, values etc. Multiculturalism relates to how the organisation deals with such aspects of cultural diversity, and is concerned with how an organisation can generate respect and understanding of the cultural differences which exist within an organisation. Organisations that can generate respect and understanding of their cultural differences will benefit from the many advantages of diversity as well as mitigate any disadvantages from a lack of cultural diversity.

It is clear in the literature, that culture exists as a series of levels and sublevels and that it can be considered in both a broad and narrow sense. See Appendix 5 for more information about Culture theories.

2.4.2 Intelligence Theory

A common school of thought among researchers is that intelligence is a combination of both structural and functional components (Becker, 2003). Structural components are related to the ability to grasp abstractions, and functional components are related to the ability to solve problems (Becker, 2003). Thus, intelligence has been defined as an individual's overall level of intellectual attainment and ability (Mayer & Geher, 1996) which involves a hierarchy of mental, and specific intelligences (Mayer & Cobb, 2000).

Another definition which was generated by a notable scholar in the field is:

“Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience.” (Gottfredson, 1997 Common statement with 52 expert signatories).

A widely accepted definition of intelligence, which is also one of the most cited is Wechsler's definition (In Salovey & Mayer, 1989) that intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment. They argue that this statement encompasses everything that researchers in the field believe intelligence to be (Salovey & Mayer, 1990).

The first theorist to contribute to early intelligence theory was Edward Thorndike in the early 1920's. It was during this era that the ground work for what would become social intelligence was made. Modern day definitions of social intelligence include that it is an “*aggregated*

measure of self and social awareness, evolved social beliefs and attitudes, and a capacity and appetite to manage complex social change” (Ganaie & Mudasi, 2015; p. 23).

Another early contributor to early intelligence theory was Charles Spearman (1904) who described ‘general intelligence’ or the “g” factor. He examined a number of mental aptitude tests, and he found that individuals who perform well on one cognitive test tend to also perform well on other tests, and vice versa for poor performances. He therefore concluded that intelligence was a ‘general cognitive ability that could be measured and expressed numerically’ (Charles Spearman, 1904). Indeed, this conceptual idea formed the basis for the subsequent measurement of the intelligence quotient (IQ) developed by Stern (1914).

Howard Gardner (1983) provided an alternative perspective to that described by Spearman (1904). His theory of ‘Multiple Intelligences’ saw intelligence theory move away from the belief that intelligence is something we are born with, something that can be measured numerically, and a capacity that is difficult to change. Gardner shifted the focus away from test scores as he believed that numerical expressions of human intelligence do not fully capture the full range of human ability (Howard Gardner, 1983). He was of the opinion that intelligent behaviour does not arise from a single unitary quality of the mind, as the “g” based theories proposed; rather, different kinds of intelligences are generated from specific pools of mental energy (Howard Gardner, 1983).

Robert Sternberg (1985) provided a definition of human intelligence which conveyed his belief that intelligence is related to how a person handles environmental changes throughout their lifetime: *“a mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one’s life”* (Sternberg, 1985; p. 45). This definition suggests intelligence is about how well an individual deals with environmental changes at various stages of their life.

Sternberg's main stance is that focusing on "*specific types of measurable mental abilities is too narrow*" as it only captures the people who are "*book smart*" (Sternberg, 2003). He argues that there are many people who score badly on intelligence tests but may be creative or be "*street smart*" and so are equally as able to use their ability to shape their environment (Sternberg, 2003). In his research he also highlights the importance of the metacognitive or mental processes that control the "strategies and tactics" which are used in intelligent behaviour.

According to Thomas et al, (2008), Sternberg further developed his ideas in relation to core mental processes and clarified these mental processes which form the basis for the concept of cultural intelligence and are further developed in the cultural intelligence model (Thomas et al, 2008).

Sternberg's theories were also among the first in the field of cognitive psychology to formally address the role and importance of culture in relation to intelligence and his work with Detterman is the foundation for the cultural intelligence model (Thomas et al, 2008).

In conclusion, it is clear that the concept of intelligence (See Appendix 5 for more detail regarding the Intelligence theories) is well established in the literature. From a practical perspective, many employers are also looking toward the concepts of emotional intelligence in addition to IQ when it comes to selecting and training employees. When it comes to situations that are characterised by cultural diversity, a specific form of intelligence, Cultural Intelligence, has been posited as one useful tool that will enable individuals to handle culturally diverse situations more effectively (Clark and Polesello, 2017).

The following section will explain how Cultural Intelligence is not only built on the foundations of intelligence theory, but that it also extends the idea of intelligence to a cultural context.

2.5 Cultural Intelligence

Cultural Intelligence (CQ) is a relatively new concept that was first introduced in 2003 and is based around a “*multidimensional framework of Intelligence*”. It is defined as “*an individual’s capability to function and manage effectively in culturally diverse settings.... a multidimensional construct targeted at situations involving cross cultural interactions arising from differences in race, ethnicity and nationality*” (Ang, et al., 2007, p. 336; Earley & Ang, 2003, p. 101). Cultural intelligence also been defined as “CQ is a capability, which increases the manager’s ability to effectively interact with people belonging to other cultures” (Jyoti et al., 2017, pp.306).

Cultural Intelligence draws on the theory of Multiple Loci of Intelligences (Sternberg & Detterman, 1986), and compliments the existing non-academic intelligences such as social intelligence, emotional intelligence and practical intelligence, but differs in the fact that it focuses on a specific domain; intercultural settings (Ang, Van Dyne & Tan, 2010). Social intelligence was developed by Thorndyke & Stein (1937) and focused on interpersonal relations; Emotional Intelligence was developed by Mayer & Salovey, (1993) and focused on understanding emotions; whereas Practical Intelligence (Sternberg, 1997) is related to solving practical problems. What makes cultural intelligence different is that none of these intelligences focused on the skills required to navigate in a diverse cultural context. The concept of CQ aims to provide a “*set of capabilities comprising mental, motivational and behavioural components that focus specifically on resolving cross cultural problems*” (Ng, Van Dyne & Ang, 2012, p. 30).

2.5.1 Components of Cultural Intelligence

CQ consists of four dimensions; metacognitive, cognitive, motivational and behavioural. It is therefore conceptualised as four different types of intelligence, with each corresponding to the

different parts of the human body where it works: metacognitive, cognitive, motivational and behavioural intelligence (Earley & Ang, 2003; Sternberg & Detterman, 1986). The four dimensions replicate the findings from a symposium which took place in 1986 and brought together 20 of the world's leading authorities on contemporary intelligence (Earley & Ang, 2003). It was at this symposium that Sternberg and Detterman gathered the views that were held by the attendees and formulated a broad conceptual framework of intelligence which moved away from the traditional framework. The resulting framework proposed four complimentary components conceptualising intelligence at the individual level, using different loci. This framework became known as the Sternberg and Detterman Multiple loci of intelligence theory and is significant because it highlights multiple forms of intelligence in relation to where they occur in the human body (Phillips, 2010). It is comprised of the following components, which are reflected in the Cultural Intelligence four components:

1. Metacognitive cultural intelligence “*reflects the processes individuals use to acquire and understand cultural knowledge*” (Ang et al., 2006, p. 5).
2. Cognitive cultural intelligence is the “*general knowledge and knowledge structures about culture*” (Ang et al., 2006, p. 5).
3. Motivational cultural intelligence is the “*magnitude and direction of energy applied towards learning about and functioning in cross-cultural situations*” (Ang et al., 2006, p. 6),
4. Behavioural cultural intelligence is the “*capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures*” (Ang et al., 2006, p.7).

The following section will look at each of the four Culture Intelligence components in depth as well as exploring their theoretical origins.

2.5.1.1 Metacognitive Cultural Intelligence

Metacognitive Intelligence is the first component of the four-factor model and it is related to the process of understanding an individual's culture experiences. It is defined as being "*an individual's level of conscious critical awareness during cross cultural interactions*" (Ang & Van Dyne, 2008, p. 5). Livermore (2010) more simply terms this aspect of cultural intelligence as "CQ Strategy" due to the fact it is related to a person's ability to be aware of and plan for their cultural understanding.

The concept of metacognition is well documented in the realm of psychology research. It is related to the "process of thinking and the mental thought process about cognitive objects" (Flavell, 1979). It has been further segmented in the literature into metacognitive knowledge and metacognitive experience (Flavell, 1987). Metacognitive knowledge refers to a person acquired knowledge relating to cognitive matters and has three separate components: person, task and strategy.

The "person" aspect of metacognitive knowledge is related to the concept of people being capable thinking entities. These cognitions relating to people can be further categorised as 'intra-individual metacognition': a person's perception as to their own ability to think;' or 'inter-individual metacognition': a person's perceptions as to the ability of others to think, and 'universal metacognition': a person's perceptions in the ability of people from all cultures to think. (Earley & Ang, 2003; Earley & Peterson, 2004).

The "task" aspect of metacognitive knowledge relates to how a person decides to process information in different contexts. An example of task metacognition would be the native English speaker who is considering the "task" of learning another language. He would perceive the task of learning Spanish to be easier than learning Arabic.

The “strategy aspect” of metacognitive knowledge refers to the procedures a person employs in order to accomplish a goal. This can also be linked to the concept of Metalearning, which focuses on the strategies employed by people when they are ‘learning how to learn’ (Earley & Ang, 2003; Schraw & Moshman, 1995).

Metacognitive experiences relate to what people consciously experience as a direct result of their cognitive activity. Metacognitive experiences are also the basis for the generation of all mental schemas that a person develops for use in future cultural situations (Earley & Ang, 2003). People have these metacognitive experiences on a daily basis and it is argued that they become progressively easier to understand as a person ages and becomes more experienced (Flavell, 1987).

Metacognitive cultural intelligence is also related to Nelson and Naren’s (1995) metacognitive framework. This framework is based on their ideas about how humans deal with objects and actions. Cognition is split into two levels, the metalevel (which is the object itself) and the object level (a dynamic model of the objective level) and relates to the flow of information between both levels.

Metacognitive cultural intelligence describes the mental processes that occur in the individuals to help them understand cultural information knowledge (Ang et al, 2007). It includes an awareness of oneself and of others which can be explained by the metacognitive knowledge “person” aspect described above. It necessitates individuals to repeatedly examine their cultural assumptions and encourages “active thinking and reflection” during each cultural experience, thereby increasing levels of cultural intelligence (Livermore, 2010). This awareness of oneself and others also requires individuals to be able to reserve judgement until they have the full information relating to a specific situation (Triandis, 2006).

Metacognitive cultural intelligence is also related to the necessity of strategically planning for all future experiences relating to cultural diversity (Ang et al, 2007). The task” and “strategy” components of the metacognitive framework allows for individuals to judge any particular cultural situation in terms of its difficulty, and also enables them to choose the appropriate strategy that will help them to deal with the particular cultural situation. Metacognitive cultural intelligence also encourages individuals to check, revisit and adapt their assumptions and mental schemas accordingly after each new cultural experience (Ang et al, 2007). This also reinforces the concept of metacognitive experience (Brislin et al., 2006; Livermore, 2010; Nelson & Narens, 1995). An example of this would be a culturally intelligent leader who gives negative feedback to a follower in a multi-cultural context, and who then reflects on their experience and uses it to inform their future encounters.

2.5.1.2 Cognitive Cultural Intelligence

Cognitive cultural intelligence is the second component of the four factor Cultural Intelligence model. It *“reflects knowledge of the norms, practices, and conventions in different cultures acquired from education and personal experiences”* (Ang et al., 2007; Earley & Ang, 2003, p. 5). However, Livermore (2010) more simply describes this aspect of cultural intelligence as “CQ Knowledge”, due to the fact it is related to an individual’s level of understanding of similarities and differences between cultures.

The study of cultural anthropology has identified the many similarities and differences exist between cultures, although it has been widely recognised that many cultures share some common characteristics known as “cultural universals” (Murdock, 1987; Triandis, 1994). The main aspect of cultural intelligence is that an individuals’ knowledge allows them to appreciate the nuances of each particular culture and appreciate that there are specific similarities and differences between cultures (Brislin et al., 2006; Imai & Gelfand, 2010).

Several categories of cultural universals have been proposed. They include material culture; arts, play and recreation; language and nonverbal communication; social organisation; social control; conflict and warfare; economic organisation; education; and world view (Cleaveland et al, 1979). A good example of a cultural universal is education. Education is universally accepted to be the means by which a society generates new knowledge and transmits knowledge through generations (Ang & Van Dyne, 2008). Yet within this cultural universal of education, there are also many cultural variations; such as a formal view whereby schools, books, teachers, academic credentials are the norm, whereas the informal view emphasises the transmission of wisdom through family members and life experiences (Livermore 2010).

As well as understanding cultural universals, cognitive cultural intelligence also refers to the level of knowledge an individual has of the cultural values and norms of other groups (Hofstede, 2001; House et al 2004). These cultural norms are a reflection of what individuals in that culture deem to be important (Hofstede, 2001). Hofstede categorises these cultural differences as follows: time orientation (event versus clock), context (high versus low), individualism versus collectivism, power distance (high versus low), uncertainty avoidance (high versus low), masculinity versus femininity, orientation (long term versus short term), performance orientation, and humane orientation (Hofstede, 2001; House et al. 2004; Livermore, 2010).

Cognitive cultural intelligence can be further explained by the view that cognition has three knowledge components namely: “*declarative, procedural and conditional knowledge*” (Schraw & Moshman, 1995). Declarative knowledge can be explained as the information an individual knows in regards to any given thing or entity. It also refers to the knowledge an individual has relating to themselves, others and objects. It has also been described as the

information contained in a person's memory generated as a result of their environmental interactions (Earley & Ang, 2003).

Procedural knowledge refers to the knowledge that is required for an individual to carry out specific actions or related to the way in which something works. Generally, it focuses on knowing how to do things. Individuals who have a high procedural knowledge can carry out actions in an automatic fashion and can also order and implement strategies effectively (Early & Ang, 2003). Conditional knowledge refers to an individual's ability to know exactly what cognitive actions to use and when is the right time to use them (Early & Ang, 2003).

The importance of cognitive cultural intelligence is evident in the fact that it impacts how an individual thinks and behaves. Just having knowledge of the cultural nuances between different groups can positively affect a person's ability to function in intercultural settings but it has been argued in the literature that cognitive cultural intelligence requires metacognitive, motivational and behavioural intelligence in order to get the full impact. For example, just having the knowledge of different cultural groups is one thing and will only be useful in intercultural settings if you choose to act and behaving in a way that reflects that knowledge is another thing. (Earley & Mosakowski, 2004; Livermore, 2010; Ang & Van Dyne, 2008; Earley & Ang, 2003).

2.5.1.3 Motivational Cultural Intelligence

Motivational cultural intelligence is the third component of the four-factor cultural intelligence model. Motivational cultural intelligence is defined as the "*capability to direct attention and energy toward learning about and functioning in situations characterised by cultural differences*" (Ang et al., 2007, p. 5). However, Livermore (2010) more simply terms this aspect of cultural intelligence as "CQ Drive" as it is related to a person's levels of interest and motivation to learn and adapt in cultural situations.

The theoretical framework for motivational cultural intelligence is influenced by the “*expectancy – value theory of motivation*” (DeNisi & Pritchard, 2006; Eccles & Wigfield, 2002). This theory proposes that an individual’s level of motivation and energy directed towards a task is dependent on two factors namely “expectancy” and “value”.

The expectancy component is a reflection of the individual’s expectation of completing a task, while the value component is a reflection of the value of completing that task (Ang et al., 2007; Ang & Van Dyne, 2008). In terms of cultural intelligence, the motivational component relates to the extent that an individual believes they are capable of relating effectively with culturally diverse others and also the level of interest or value they attribute to having interactions with culturally diverse others (Earley & Ang, 2003; Templer et al., 2006).

The theory of self-efficacy also plays an important role in relation to the expectancy values associated with an intercultural interaction. Self-efficacy is defined as “*a judgment of one’s capability to organise and execute courses of action to attain designated goals or accomplish a certain level of performance across activities and contexts*” (Bandura, 1986, p. 391) and is a key component in social cognitive theory (Zimmerman, 2000). Self-efficacy in relation to cultural intelligence is related to a person’s assurance in their own ability to act appropriately in intercultural settings, or to act culturally intelligent (Livermore, 2010).

There are four types of experience which can impact a person’s level of self-efficacy in multicultural situations (Bandura, 1994; Earley & Ang, 2003). Firstly, “*Authentic Mastery experiences*” which enable the individual to succeed in carrying out a specific task despite setbacks and obstacles. In overcoming these challenges and subsequently succeeding in the task, an individual can increase their self-efficacy (Bandura, 1994; Earley & Ang, 2003). Secondly, “*vicarious experience*” which enables the individual to develop their levels of self-

efficacy by learning from the actions and outcomes of another individual in a similar multicultural situation (Bandura, 1994; Earley & Ang, 2003). Thirdly, “*Social Persuasion*” is an individual receiving verbal encouragement or praise from a peer in regards to his capabilities in culturally diverse settings (Bandura, 1994; Earley & Ang, 2003). Finally, “*managing psychological arousal*” relates to the individual’s emotional states. It is therefore important to try and control the levels of anxiety, weariness and strain that occur due to intercultural interactions as these will affect the individual’s levels of self-efficacy (Bandura, 1994; Earley & Ang, 2003).

Having high levels of self-efficacy is advantageous in multicultural situations, as it implies that those individuals may be more willing to engage in various types of cultural experiences and are more likely to persevere through any obstacles or challenges that may occur, including setbacks or failures (Earley & Peterson, 2004). Individuals with high levels of self-efficacy are able to completely immerse themselves into a new cultural situation and are able to manage the situation and react accordingly (Earley, 2002). It has also been demonstrated that high levels of cultural efficacy can positively influence problem solving and strategic planning outcomes (Earley & Peterson, 2004).

The “value” element of the expectancy value theory is also affected by the concepts of extrinsic and intrinsic motivation (Livermore, 2010). Extrinsic motivation, in a cultural intelligence context, relates to the tangible outcomes that an individual receives due to positive intercultural experiences such as career development, advanced innovation, expanded global networks or increased salary and profit (Livermore, 2010). Intrinsic motivation refers to the intangible outcomes derived from positive intercultural experiences (Ang & Van Dyne, 2008). These outcomes are usually feelings of enjoyment and satisfaction derived from a positive performance in an intercultural setting as well as placing a value on that level of enjoyment or

satisfaction (Van Dyne et al., 2010). It is argued in the literature that while extrinsic motivation is important, it is the intrinsic motivation that is the driving force behind motivational cultural intelligence (Ang & Van Dyne, 2008; Deci & Ryan, 1985, Brancu, et al., 2016). Livermore (2010) takes this argument further by stating that culturally intelligence individuals must have a “deeper altruistic motive” and that it exists only where individuals have a “*true love for the world and for people*”.

It is evident from the literature that a lot of emphasis is put on the motivational cultural intelligence factor as it is a factor which triggers and drives the subsequent Cognitive and Metacognitive processes which occur during intercultural encounters (Ang & Van Dyne, 2008; Templer et al., 2006, Gooden, et al., 2017). It is interesting to point out that in the general literature on Intelligence there is little emphasis placed on the motivational aspect, yet for cultural intelligence it is widely accepted in the literature that motivational intelligence is a critical component. So while the declarative knowledge, procedural knowledge and conditional knowledge described previously are important, they are only useful if the individual has the necessary motivation in order to act on this knowledge (Earley & Ang, 2003).

2.5.1.4 Behavioural Cultural Intelligence

Behavioural cultural intelligence is the fourth component of the four factor Cultural Intelligence model and is defined as “*an individual’s capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures*” (Ang et al., 2007, p. 5). This aspect of CQ reflects the skills and awareness needed to articulate verbal and nonverbal actions that are appropriate in a particular cultural setting (Charoensukmongkol, 2016). However, Livermore (2010) more simply terms this aspect of cultural intelligence as “CQ Action” as it is related to a person’s ability to act appropriately in a range of cross-cultural situations.

The three preceding components of cultural intelligence described above, metacognitive, cognitive and motivational, lead to the outward manifestations of verbal and nonverbal actions - behaviour. This aspect of cultural intelligence, is vitally important culturally sensitive outward manifestations of vocal, facial, and other outward expressions during intercultural interactions and is therefore well documented in the literature (Ang & Van Dyne, 2008; Earley & Ang, 2003).

The concept of behavioural cultural intelligence ((Earley & Ang, 2003) is underpinned by three core assumptions:

1. behaviours are overt or external actions, as opposed to covert or internal behaviours
2. behaviours occur in the social context of interpersonal or interactional situations,
3. behaviours are mindful, strategic, purposive, and motive-oriented contrasted with behaviours that are non-conscious, passive, and less agentic (Earley & Ang, 2003).

The theoretical foundation of behavioural cultural intelligence is also underpinned by the self-presentation and impression management theory (Earley & Ang, 2003; Goffman, 1959). This theory states that “*a basic motive of individuals in social situations is to present themselves to others in a favourable manner*” (Earley & Ang, 2003, p. 181).

It is posited that individuals have an awareness of how they are perceived by others around them in a particular situation (Earley & Ang, 2003). This level of awareness can be categorised, using the following four levels of impression as described by Leary (1996):

1. Impression oblivion - the individual has no awareness of how they are being perceived at any level.
2. Preattentive or unconscious impression scanning - While the individual has an awareness of others forming perceptions of them they unconsciously continue to give their attention to other things.

3. Impression awareness – Whereby an individual is fully aware that others are forming perceptions or impressions and cognitively chooses to try and manage those perceptions.
4. Impression focus – Where an individual directs all cognitive choices into making a good impression to others.

An individual who is behaviourally culturally intelligent, will ideally operate at the third level - impression awareness. Individuals who find themselves at levels one and two are not sufficiently aware of their levels of impression, while those individuals at level four risk becoming dysfunctional as their degree of focus on creating a good impression becomes too extreme (Earley & Ang, 2003).

As noted, behavioural cultural intelligence refers to the ability of an individual to modify their verbal and nonverbal behaviours during an intercultural exchange in order to be perceived in a positive light (Earley, 2002; Earley & Ang, 2003). Verbal behaviours relate to the use of words and their different meanings, language and speech. Words are powerful in that they facilitate communication and can foster vision, encouragement and ideas. However, words and their meaning and effect can have different effects depending on the cultural context (Livermore, 2010). An individual who has high cultural intelligence will be able to adopt the appropriate verbal behaviours in order to generate positive outcomes in intercultural situations.

Language, and in particular the acquisition of a new language, plays an important role in being able to adapt verbal behaviour. Language is a critical component of a culture, as it contains many subtle clues about a culture so much so that it would be difficult to attain a high level of behavioural cultural intelligence without at least a basic proficiency in the particular language in question (Earley 2002; Earley & Ang, 2003). Verbal behaviours also refer to functional acts of speech, such as greetings, apologies, complaints, and compliments, (Ishihara, 2007). A

speech act can have culturally significant norms embedded and can vary from one culture to another.

Non-verbal behaviours include paralanguage (tone of voice, rate of speaking, overall loudness), physical appearance, facial expressions, kinesics, proxemics, haptics, and chronemics (Earley & Ang, 2003; Livermore, 2010). Paralanguage has the potential to vary from culture to culture, and thus can be interpreted differently during intercultural situations. An example of this is in 'high context' cultures who view silence as an act of respect or to signal a period of quiet reflection, while 'low context' cultures may feel uncomfortable with an absence of communication (Earley & Ang, 2003).

Physical appearance can influence the perception of an individual within a particular cultural setting and being able to "fit in" with the appearance of the target culture can improve communication (Earley & Ang, 2003). This is difficult to achieve in the UAE context as the UAE nationals wear their national dress, while all other individuals wear their normal attire. This immediately creates a distinction between UAE nationals and all other individuals, which may have an impact on the behavioural cultural intelligence. Facial expressions and personal space preferences can also influence an individual's perception in a host culture. With regard to facial expressions, a culturally intelligent individual will usually be extremely cautious when using or interpreting them as they can vary between cultures. Similarly, personal space preferences will also differ between cultures and are greatly influenced by factors such as formal versus intimate relationships, and cultural norms and a cultures attitude and interpretation of touch (Altman & Chemers, 1980; Altman & Vinsel, 1977; Earley & Ang, 2003). This has particular resonance with a UAE context due to cultural norms, such as gender segregation.

Overall, it is important to have high levels of behavioural cultural intelligence as verbal and nonverbal actions are a noticeable and prominent feature of intercultural interactions (Ang et al, 2007). An individual with high behavioural cultural intelligence will endeavour to display suitable and acceptable behaviours in culturally diverse situations. In order to achieve this, they are able to tap into a range of verbal and non-verbal capabilities and adapt them to suit the situation. They are able to demonstrate culturally appropriate words, tones facial expressions and gestures (Gudykunst et al., 1988).

2.5.2 Measuring Cultural Intelligence

The empirical research on CQS have been both strong and encouraging (Collins, et al., 2016, Schlaegel & Sarstedt, 2016). The first academically validated instrument to measure cultural intelligence is called “The Cultural Intelligence Scale (CQS)” developed by Ang et al (2007) (See Appendix 6 - Part 1). This scale was developed in order to facilitate the validation of Earley and Ang’s (2003) conceptualisation of cultural intelligence. According to Ang et al. (2007) *“Scale development and validation followed rigorous construct development procedures, involving multiple development samples and multiple cross-validation samples, over a period of several years”* (p. 361).

The cultural intelligence instrument, *“measures the multi-faceted characteristic of individuals’ cultural intelligence by assessing their intelligence through meta-cognitive, cognitive, behavioural, and motivational facets”* (Ang et al., 2007, p. 362). The authors of the scale explain that the instrument has been through an extensive validation process, and research has demonstrated that it is generalisable across *“a) multiple student and executive samples, b) time intervals ranging from four weeks to four months (c) countries such as Singapore, the U.S, Ireland (d) both global and domestic culturally diverse samples”* (Van Dyne et al, 2012).

The CQ scale consists of twenty questions, each of which is measuring one of the four CQ factors. There are four metacognitive questions, six cognitive, five motivational and five behavioural. These twenty questions were derived from an initial list of fifty-three items identified by the authors; these fifty-three items were refined further to a list of 40 items by a panel of academic and professional business personnel (each with significant cross-cultural expertise) by randomly ordering the fifty-three items in terms of clarity, readability and definitional fidelity. The forty remaining factors were then reduced to 20 factors during a series of validation studies, details of which are listed below (Ang & Van Dyne, 2008):

Study 1: Two groups of undergraduate students in Singapore and USA completed online questionnaires. The study was then extended further in Singapore where data was collected at three separate intervals over the same semester.

Study 2: A sample of business executives on an executive development program in Singapore. The Purpose was to triangulate findings from study 1.

Study 3: Foreign professionals and their supervisors. The Purpose was to change from an institutional setting to a field setting.

Bücker, et. al., (2016) present various empirical cultural studies validating the CQS from all over the world, as detailed in Appendix 7.

2.5.2.1 The Extended CQS

A recent development in CQ research is the creation of an Expanded Cultural Intelligence Scale (ECQS) (see Appendix 8). Van Dyne et al (2012) argue that research must move beyond the past approaches and should be driven by the need to gain a greater understanding of each of four CQ factors, and therefore developed an extended scale. This was prompted by critiques of the original CQS scale, such as those voiced by Gelfand, Imai, and Fehr (2008) who suggested that the CQ scale has been in ‘a very embryonic state’ in terms of theorising, and research on

the four factors. Van Dyne et al (2012) also argued that there is a significant gap in the body of literature relating to CQ, and that the development of a more advanced model that identifies sub-dimensions would serve a number of valuable additional scientific functions, most notably providing a theoretical and coherent synthesis which is not currently available in the multicultural competency literature.

In response to this gap in the literature, Van Dyne et al (2012) identified sub dimensions for each of the four primary factors of cultural intelligence. In total, 11 sub-dimensions were specified and presented in what was intended to be an expanded conceptualisation of the original four factor model. This expanded model is currently at the validation level of development and there are calls in the literature for further validation efforts. Although Van Dyne et al (2012) indicated the future direction of research on CQ, for the purpose of this thesis the original CQ Scale will be used as it is the only validated CQ instrument across various samples, time, and countries (Ang et al., 2007; Moon, 2010; Ward et al.,2009).

2.5.3 Conceptual Distinctiveness of Cultural Intelligence

The concept of CQ is similar to yet distinct from other types of intelligence, personality traits, and other cultural competencies (Ang et al, 2014).

2.5.3.1 Distinctiveness from other intelligences

The concept of cultural intelligence is similar to, but also distinct from, general cognitive ability. While general cognitive ability focuses on the cognitive loci of intellectual abilities, CQ incorporates the biological, motivational, cognitive, and behavioural loci of intercultural capabilities (Ang et al., 2007).

While general cognitive ability and CQ are both considered as key predictors of performance, it has been argued that general cognitive ability is a key predictor of performance across jobs and settings, while CQ is considered to be uniquely relevant to performance in intercultural contexts (Ang & Van Dyne, 2008). Therefore, it can be argued that CQ relates positively but weakly to general cognitive ability (Ang et al., 2007).

There is evidence in the literature to suggest that social intelligence, emotional intelligence, and cultural intelligence, whilst related to one another, are also quite distinct in their own right. The main shared similarity is that they all help facilitate effective interpersonal interactions. However, while CQ focuses solely on intercultural interactions, emotional and social intelligence are not specific to intercultural settings. (Ang et al., 2007; Kim, Kirkman, & Chen, 2008; Lin, Chen, & Song, 2012; T. Moon, 2010a; Rockstuhlet al., 2011; Ward et al. 2009; Van Dyne et al., 2008).

It has also been demonstrated that CQ predicts performance in intercultural contexts, more so than emotional intelligence (Rockstuhl et al., 2011).

2.5.3.2 Distinctiveness from personality traits

Personality traits describe a person's general, habitual, and permanent behavioural tendencies across situations and time (Costa & McCrae 1992; Funder 2001), whereas CQ relates to malleable capabilities which determine an individual's effectiveness in intercultural environments. Hence, it is considered that personality traits and CQ are conceptually distinct from one another. However, personality is also related to CQ because associated behavioural tendencies will also influence a person's development of CQ (Ang & Van Dyne, 2008).

Studies have also examined the relationship between CQ and the Big-Five personality traits (openness to experience, conscientiousness, extraversion, agreeableness, neuroticism) (Ang, Van Dyne, & Koh, 2006; Ang et al., 2007; G. Chen, Kirkman, Kim, Farh, & Tangirala, 2010; Duff, Tahbaz, & Chan, 2012; Kim et al., 2008; Oolders, Chernyshenko, & Stark, 2008; Rockstuhl et al., 2011; 2013b; Sri Ramalu, Shamsudin, & Subramaniam, 2012b; Ward & Fischer, 2008; Ward et al., 2009). All of these studies tested the distinctiveness of CQ and the BIG 5 personality traits demonstrated that the two constructs are empirically distinct.

In one of the studies, the Big 5 personality trait which was found to be most closely related to CQ was ‘openness to experience’, which was demonstrated to be related to all four CQ factors (Ang et al. 2006) By contrast, extraversion only predicted cognitive, motivational, and behavioural CQ, emotional stability and agreeableness predicted behavioural CQ only, and conscientiousness predicted metacognitive CQ only (Ang et al. 2006).

2.5.3.3 Distinctiveness from other cultural competencies

The construct of cultural intelligence is also distinct from other intercultural competency frameworks and their associated scales used for measurement. For example, cultural competencies is a term used to describe numerous capabilities that can facilitate cultural effectiveness (Kurpis, et al. 2016), whereas CQ is described in the literature as being ‘the new kid on the block’ in terms of the historical development of cultural competence research (Gelfand et al. 2008).

Previous analyses of cultural competence models have recognised more than 30 models and over 300 concepts related to cultural competencies (Holt & Seki, 2012; Leung et al., in press, Spitzberg & Changnon, 2009).

Table 2.3 below is a comparison of similar intercultural competency frameworks and their associated scales (adapted from Ang et al, (2008).

Table 2.3 Intercultural Competency Frameworks

Metacognitive Aspect	Cognitive Aspect	Motivational Aspect	Behavioural Aspect
Cross-Cultural Adaptability Inventory (CCAI) (Kelly & Meyers, 1995)	Cultural Shock Inventory (CSI) (Reddin, 1994), Culture-General Assimilator (CGA) (Cushner & Brislin, 1996);	Multicultural Awareness-Knowledge-Skills Survey (MAKSS)	Intercultural Sensitivity Inventory (ISI) (Bhawuk & Brislin, 1992), Overseas Assignment Inventory (OAI) (Tucker, 1999)
Intercultural Development Inventory (IDI) (Hammer & Bennett, 1998)			

The Cultural Intelligence model is the only model which addresses all four components. Cultural Intelligence is also the only intercultural competency model that is related to contemporary intelligence theory and which incorporates the four factors of metacognitive, cognitive, motivational, behavioural intelligence (Ang et al., 2007, Ang & Van Dyne, 2008).

Many of the intercultural competency scales shown above (such as CCAI, CSI, IDI, MAKSS, and OAI) mix malleable competencies with stable personality characteristics. It has been argued that this may impact the validity and precision of the construct (Ang et al., 2007, Ang & Van Dyne, 2008). The cultural intelligence model refers to a set of state like capabilities that

can be adapted and improved through training and cultural experiences (Earley & Peterson, 2004; Ng, Van Dyne, & Ang, 2009). Cultural intelligence capabilities are also not limited to a particular culture or country, in contrast to the culture specific assimilator model. This is because the concept of cultural intelligence is not based on country specific knowledge or behaviours, instead it emphasises an individual developing a broader set of capabilities that will then enable them to engage in a culturally diverse environment, regardless of the predominant culture or country. Gafand et al. (2008) describe some advantages of the CQ model as having theoretical coherence and precision, as well as identifying cultural competencies which are missing from other models. They also believe that the theoretical approach of the CQS connects cultural research across many disciplines. The development of the CQ model has also highlighted the role of metacognition and motivation in cultural competencies, which are viewed as being the new frontier in culture research (G. Chen, et al., 2010; Chen, Liu, & Portnoy, 2012; Peng et al., 2013).

Cultural intelligence is also often compared to the well-known concept of ‘Global Mindset’. Global Mindset has been defined as “*the ability to scan the world from a broad perspective, always looking for unexpected trends and opportunities that may constitute a threat or an opportunity to achieve personal, professional or organisational objectives* (Rhinesmith, 1995, p. 24). It has also been described as a “*combination of awareness and openness to the diversity of cultures and markets with an inclination and capability to integrate across the diversity*” (Lovvorn et al, 2011). Similarities between Global Mindset and Cultural Intelligence include that they are both state like in the way that they can evolve and be developed, and that they both consist of feedback mechanisms that help develop and refine a person’s mental schemas. However, Rhinesmith (1995) states that global mindset is “*a way of being, rather than a set of skills*” (p. 24), whereas cultural intelligence emphasises a clearly defined set of capabilities that helps a person to function in different cultural contexts.

The global mindset model, as developed by Kedia and Mukherji (1999), makes reference to only two components - skills and knowledge - which are required in order for a person to have a global mindset, their reasoning that the knowledge is information about cultural similarities, differences and skills, and an individual needs to be able to put that knowledge into action (Lovvorn et al, 2011). The Cultural Intelligence model includes both elements of knowledge and skills and includes the additional components of Strategy and Drive.

2.5.4 Outcomes of Cultural Intelligence

Cultural Intelligence, and in particular, the construct validity, has been advancing in terms of its measurement and substantive issues (Ng & Earley, 2006). While initial efforts primarily focused on conceptually theorising, empirical research on the concept and its antecedents has been growing steadily.

It is evident that there are a number of individual outcomes that have been linked to cultural intelligence and which have significant relevance to individuals working in culturally diverse environments. These outcomes include task performance, cultural judgment and decision making, multicultural team effectiveness, intercultural negotiation, organisational innovation, and cross-cultural adjustment (Ang et al., 2007).

2.5.4.1 Task Performance

With regards to task performance, it has been highlighted that cultural intelligence in general is positively related to enhanced task performance. Moreover, it was found that the metacognitive and behavioural components of cultural intelligence were particularly significant when it came to task performance (Ang et al., 2007; de la Garza Carranza & Egri, 2010; Rose, Ramalu, Uli, & Kumar, 2010, Jyoti & Kour, 2017). A study which surveyed international managers and foreign professionals, using problem solving scenarios and peer reviewing, highlighted the importance of the metacognitive and behavioural elements of

cultural intelligence (Ang et al., 2007, Presbitero, 2016). Similarly, a study carried out by Rose et al (2010) which examined 332 Malaysian expatriate business managers, also highlighted the relationship between metacognitive and behavioural cultural intelligence and task performance.

Metacognitive cultural intelligence is an important factor in terms of task performance as it facilitates the accomplishment of tasks due to increased awareness and strategic implementation of cultural knowledge. It is also linked to the ability to use reflection to analyse cultural interactions and make amendments for future interactions (Earley & Ang, 2003). Behavioural cultural intelligence facilitates the accomplishment of tasks more effectively as it encourages modification of verbal and nonverbal behaviours which in turn help to decrease misunderstandings and promotes respect in all aspects of cultural engagement (Earley & Ang, 2003).

2.5.4.2 Cultural Judgement and Decision Making

In regards to cultural judgement and decision making, it has been demonstrated that cultural intelligence facilitates effective decision making and informed cultural judgments (Ang et al., 2007; Mannor, 2008). Leaders are faced with many different types of decisions on a daily basis and are increasingly having to deal with cultural issues. Through proper evaluation and interpretation of these cultural issues, leaders can assist in their cultural judgement and decision-making processes. This process involves steps such as agentic and motivated reasoning, evaluating all available information and a consideration of all possible outcomes (Earley & Ang, 2003).

There is evidence to suggest that cultural intelligence, and in particular metacognitive intelligence, is positively related to cultural judgement and decision-making effectiveness (Ang

et al., 2007; Mannor, 2008, Delpechitre & Baker, 2017). Mannor (2008) also highlighted that cultural intelligence played an important role in cultural judgement and decision making in his 'Strategic Leadership' theoretical model. Further empirical research carried out by Ang et al (2007) also highlighted the particular importance of metacognitive and cognitive intelligence in predicting cultural judgement and decision making. Metacognitive cultural intelligence facilitates cultural judgement and decision making by encouraging individuals to discard cultural stereotypes, and promotes the understanding of cultural nuances and variability that exists. This can lead to individuals being in a better position to make assessments and evaluations based on cultural situations, which positively impact decisions (Hampden-Turner & Trompenaars, 2006). It has also been highlighted that cognitive cultural intelligence can assist individuals to recognise cultural similarities and differences, and promotes the use of this information to help develop solutions to diversity based problems (Ang et al, 2007).

2.5.4.3 Multicultural Team Effectiveness

In regards to multicultural team effectiveness, research indicates that metacognitive, cognitive and behavioural cultural intelligence promotes interpersonal trust in multicultural teams (Moynihan, Peterson, & Earley, 2008; Rockstuhl & Ng, 2008; Shokef & Erez, 2006). It is evident that trust is vitally important in multicultural team effectiveness (Gregory, Prifling, & Beck, 2009; Rockstuhl & Ng, 2008). Individuals who work in multicultural teams, who also display high levels of cultural intelligence, are able to better manage cultural differences by adjusting mental schemas accordingly in order to increase and improve the level of interactions, as well as helping them to develop a variety of behaviours which minimises cultural distance (Brislin et al., 2006; Triandis, 2006). Leaders who exhibit lower levels of cultural intelligence could have less elaborate diversity cognitions (Rosenauer, et al., 2016).

A study carried out by Rockstuhl and Ng (2008), involving 259 exchange students, investigated cultural intelligence and its impact on multicultural team effectiveness. Results indicated that cultural intelligence was effective in mitigating the negative effects that cultural diversity had on interpersonal trust. This in turn increased the level of team effectiveness (Rockstuhl & Ng, 2008). A similar study involving MBA students also found that cultural intelligence was positively related to team performance and increased trust among teams (Moynihan et al., 2006).

The nature and composition of multicultural teams differs in terms of in age, gender, race, cultural background, tenure, education, or function (Flaherty, 2008). The membership of multicultural teams can also be classified further as being 'in-group' versus 'out-group'. In-group members will be considered to be more trustworthy, and this is important in terms of team effectiveness. High levels of cultural intelligence will lead to more 'in-group' members, thereby increasing overall team effectiveness (Keung, 2011).

2.5.4.4 Intercultural Negotiation

Intercultural negotiation is considered to be a necessary skill for individuals working in a multicultural environment (Adler, 2002; Bernard, 2009; Gonçalves, 2016). Research, involving 75 American and 75 Asian students who were given negotiation simulated exercises, demonstrated that cultural intelligence is positively related to intercultural negotiation (Imai & Gelfand, 2010). Culturally intelligent individuals were more likely to be cooperative in nature, have high cognitive motivation, which then resulted in a more effective negotiation process, and ultimately better outcomes (Imai & Gelfand, 2010).

Interestingly, motivational cultural intelligence was the strongest predictor of intercultural negotiation effectiveness. It has been discussed previously that individuals who display higher

levels of motivational cultural intelligence were more likely to function effectively in culturally diverse situations. This is also linked to self-efficacy, as individuals with higher levels of self-efficacy have the confidence to endure intercultural negotiations, and overcome any obstacles or difficulties (Imai & Gelfand, 2010; Klafehn, Banerjee, & Chiu, 2008; Livermore, 2010).

2.5.4.5 Organisational Innovation

With regards to Organisational Innovation, it is documented that innovation can enable organisations to establish and maintain competitive advantage thereby increases the chances of successful performances (de la Garza Carranza & Egri, 2010; Elenkov & Manev, 2009; Livermore, 2010). Organisational innovations has been defined in the literature as being the “*introduction of organisational structures, training programs, and planning processes implementation of a new organisational methods in the undertaking’s business practices, workplace organisation or external relations*” (Damanpour & Evan, 1984, p. 397). A study involving 213 European expatriate managers and 1,056 followers highlighted the link between cognitive and behavioural cultural intelligence, and the rate of organisational innovation. It was found that being cognitively culturally intelligent enabled individuals to identify the similarities and differences between cultures and that this capability can facilitate more culturally sensitive organisational innovations (Elenkov & Manev, 2009). Behavioural cultural intelligence involves the adaptation of verbal and non-verbal behaviours. In terms of organisational innovation, behavioural cultural intelligence also leads to the adoption of the correct cultural behaviour which in turn leads to increased trustworthiness, reduces the level of cultural distance and helps foster an atmosphere of collaboration and trust (Elenkov & Manev, 2009).

2.5.4.6 Cross Cultural Adjustment

Cross-cultural adjustment is another documented outcome of cultural intelligence (Chen *et al.* 2014). It is related to the “*level of psychological comfort and familiarity an individual has with*

their new cultural environment” (Black, 1990 cited in Takeuchi et al. 2002, p. 655). Studies indicate that motivational and behavioural cultural intelligence are both positively related to cross cultural adjustment (Ang et al., 2007; Dagher, 2010; Ramalu, Rose, Kumar, & Uli, 2010; Templer et al., 2006, Presbitero & Quita, 2017). The theory of cross cultural adjustment has three component parts; ‘general adjustment, interaction adjustment and work adjustment’. ‘General adjustment’ refers to how well an individual adapts overall to their new culture and living conditions; ‘Interaction adjustment’ relates to how well the individual can interact and form interpersonal relationships with nationals from the host nation; ‘Work adjustment’ is related to how well the individual can adapt to the working requirements and environment of the new country (Black & Stephens, 1989).

Solomon & Steyn (2017), reported that research has repeatedly demonstrated that CQ positively impacts the ability of individuals to successfully navigate and adapt to the many manifestations of new cultures they may find themselves exposed to. This included factors such as living conditions (including housing and healthcare), daily interactions with people from the host culture, and unique local approaches to employment and education.

Cross cultural adjustment and cultural intelligence was also investigated in a study of 332 Malaysian business leaders who completed the Black and Stephens (1989) Expatriate adjustment scale (Ramalu et al., 2010). The results of this study emphasised the importance of motivational cultural intelligence, in relation to cross cultural adjustment. A subsequent study carried out by Dagher (2010), which focused on Arab expatriate business professionals, also produced a positive correlation between motivational cultural intelligence and cross-cultural adjustment.

It is argued that individuals who have higher levels of motivational cultural intelligence also have more motivation and yearning to discover and experience new cultural environments.

They also have confidence in their own ability to adapt to their new work, home and social life in a new environment (Ang et al., 2007; Dagher, 2010; Ramalu et al., 2010; Templer et al., 2006).

Behavioural cultural intelligence also has an important role to play in cross cultural adjustment, as it enables individuals to adjust in a new environment by manifesting culturally appropriate actions (Dagher, 2010). Performing a wide variety of behaviours is essential if an individual is to be able to adapt fully and meet the many demands of living and working in a new environment (Earley & Ang, 2003; Lee & Sukoco, 2010).

Van Dyne, et al. (2008), further elaborates on the potential outcomes of CQ and categorises them as being either proximal or distal in nature; examples of 'proximal outcomes' includes global identity, interpersonal trust, idea sharing, cooperation, interactions with locals, communication, patience, integrative negotiations, cultural decision making, diversity of social networks, homophily of friendship networks, team satisfaction, team cohesion, leader emergence, international executive potential, lower emotional exhaustion, plus various forms of psychological and sociocultural adjustment as well as psychological well-being.

Whereas examples of 'distal outcomes' includes expatriate performance, task performance, job performance, cultural sales performance, joint negotiation effectiveness, organisational citizenship behaviour, adaptive performance, creative collaboration, team learning, team effectiveness, leader effectiveness, and organisational innovation. (Van Dyne, et al. 2008, p. 27).

2.5.5 Criticisms of Cultural Intelligence

Cultural Intelligence, like many other theories and concepts, is not without its critics. As the concept is relatively new, there are only a few criticisms reported (Elenkov & Manev, 2009).

It is argued that while CQ has great potential in helping to understand and explain what leads to effectiveness in cross cultural interactions, the concept is hindered by the lack of an accepted definition or operationalisation (Thomas et al, 2008). It is argued that the current definitions which exist, merely portray the concept as a “*loosely aggregated set of facets conceptually similar to intercultural competency, global mindset or a host of other similar terms, or as an extension of constructs such as social intelligence to a new domain*” (Thomas et al, 2008, p. 128).

Holmes (2002) discusses cultural intelligence in reference to culture at the national level, organisational level and functional level, and he argues that the majority of the literature on cultural intelligence focuses on the national level. Therefore, it is likely that the term "cultural intelligence" could be confusing, since culture is not used solely to describe national culture. While it is possible that the skills of cultural intelligence allow an individual to move in and out of national cultures and/or countries easily, it may also allow an individual to move in and out of organisational cultures easily, this is not addressed in the literature.

Another issue is that cultural intelligence may be overlapping, or simply renaming, constructs that already exist (Thomas, 2006). Whilst there appears to be a wide range of constructs that touch on aspects of cultural intelligence (i.e. global mindset and cross-cultural competence), only recently have attempts been made to unambiguously define terms related to cultural facets of intelligence (Thomas, 2006). For example, a construct which is similar to cultural intelligence is cultural literacy, defined as the "ability to value and leverage cultural differences" (Alon & Higgins, 2005: 507). Others define it as an awareness of various cultural events in an individual's own culture (Giddings, 1998; MacKinnon & Manathunga, 2003; Pentony, 1997; Pentony et al., 2001). This is quite a different delineation than those previously mentioned, thereby illustrating how the constructs related to cultural intelligence are unclearly

defined. Additionally, while the latter definition of this construct touches on the knowledge component of cultural intelligence, which is a facet of cognition, it does not address the behavioural or motivational components; therefore, it is not as broad as cultural intelligence.

Ang and Early (2003) built the cultural intelligence concept around an already existing intelligence theory (multiple loci of intelligence). Thomas et al (2008) argued that Cultural intelligence builds on these ideas, but is merely an application of existing intelligence constructs to a new domain.

In Thomas et al. (2012), the authors suggest an alternative to the four factor CQ model, and in particular they suggest that motivational CQ is not an important factor. This is in contrast to the beliefs of the founders of the CQ concept; Prof Soon Ang, who when asked during an interview in 2014 (See Appendix 9) which of the factors she felt was most important, replied that motivational intelligence was the most influential factor. Her argument being that all the other components can be learned (metacognitive, cognitive and behavioural) but if the motivation does not exist then cultural intelligence levels will not improve (Ang, 2014).

Criticism has also been directed to the CQS instrument in terms of its reliance on self-reporting. Care must be taken with self-reporting questionnaires. It has been argued that the ability of individuals to provide a true and reliable self-analysis into their own cognitive processes and abilities is highly unlikely (Nisbett and Wilson, 1977).

2.5.6 Conclusion

This review of CQ has highlighted numerous outcomes, in a diverse environment, and its potential role as a leadership competency. While there are many other cultural competency models and theories that could be applied to the UAE education sector, it is felt that Cultural Intelligence is the best approach to take, for the following reasons:

Firstly, it is a concept that is deeply rooted in intelligence theory, but it takes a more contemporary view. So, while linked to social and emotional intelligence it goes a step further and applies the same principles to a specific setting which is characterised by diversity. Given the diverse setting of the UAE, it is therefore considered to be suitable scale to be used.

Regarding the construct itself, it is a multidimensional construct which encompasses the factors of cognition, metacognition; behaviour and motivation, as opposed to other models on culture which focus on a single factor, or a combination of two or three factors, but not all four. It is therefore considered to be a comprehensive model which will address many dimensions of culture. The CQ measurement scale, is also a validated instrument that has proven to be reliable across audiences, time, and countries.

Cultural Intelligence is also considered to be an individual capability that is state like, meaning that it can be learned and developed through training and experience. From a practical perspective, it can be used in conjunction with future interventions and training in order to gauge improvements in cultural capabilities. This is something that may be useful for the UAE in the future as there is limited research on CQ. It is also not a construct that is bound to a specific culture, and so it does not depend on individuals having pre-specified knowledge. Instead, it focuses on a general set of capabilities which are relevant to situations purposefully characterised by cultural diversity.

Finally, there have been many studies which have identified the links between CQ and effective leadership, and leadership outcomes. However, the majority of the research which has been carried out to date has been carried out in a business / global leadership domain, and in a Western setting. There have been very few studies which specifically look at the relationship between CQ in an educational leadership context. The nature of this relationship may have

practical implications for both the selection and training of school leaders, and theoretical implications which may further the domains of cultural intelligence and leadership.

The next sections will aim to align the concept of CQ with leadership in conjunction with the culturally diverse UAE education sector.

2.6 Leadership

The study of leadership is a complex and vast area with various theoretical approaches being developed as a means of understanding the complexity. Northouse (2016) describes leadership as still being ‘*a highly sought after and highly valued commodity*’ (p. 1), as people and organisations continually strive to further their understanding as to what makes a good leader. However, while the quantity of leadership theories continues to increase, there is also a belief among some academics that many of the theories are conceptually weak, lack a strong empirical foundation, and are also contradictory with one another (Yukl, 1989).

This section will detail the numerous distinctly separate areas of leadership literature with focus on the areas of leadership which are related to this research. This will include leadership definition, leadership theories, leadership style, the relationship between leadership style and organisational performance, and the relationship between leadership and culture, and leadership and leadership adaptability.

2.6.1 Definitions of Leadership

Extensive efforts have been made in order to try and describe leadership (Nelson & Squires, 2017), however this does not appear to have culminated in a single universally accepted definition. Sogdill (1974) recognised that there are many definitions of leadership, stating ‘*there are almost as many definitions of leadership as there are people attempting to define it*’ (p. 7).

Over time, the traditional definitions of leadership have shifted in focus more recently, from the notion of the individual towards the notion of leadership being a social process. Hersey and Blanchard (1981), suggest that “*most writers on management would agree that leadership is a process of influencing the activities of an individual group in its efforts towards accomplishing*

goals in a given situation” (p. 86). Northhouse (2016) built on the ideas put forward by Hersey and Blanchard and developed one of the most commonly used definitions of leadership which states that “*Leadership is a process whereby an individual influences a group of individuals to achieve a common goal*” (p. 3). This definition illustrates this shift in focus towards viewing leadership as a process which happens within a group setting. This view of the leader also includes a central purpose, with the leader exerting influence and power in order to influence people in order to achieve the purpose. Although a lot of authors agree with this definition of leadership, there have been many different attempts at viewing, studying and conceptualising leadership.

For example, it is claimed by Yukl (1989) that *'researchers usually define leadership according to their individual perspectives and the aspect of the phenomenon of most interest to them'* (p. 10). Yukl's argument is contrary to Hersey and Blanchard's view, which suggests that there is little that most writers agree on regarding this aspect. Yukl (1992) suggested that *'Most definitions on leadership share the common assumption that leaders influence subordinate's task and social behaviour'* (p. 15). Yukl (1989) went on to define leadership in terms of *'individual personal traits, leader behaviours, and responses to leader behaviour, interpersonal exchange relationships, interaction patterns, role relationships, follower perceptions, task goals, and nature of work processes'*.

Whilst leaders clearly influence the tasks of subordinates, this ignores the possible different roles of the leader and manager, and that many successful subordinates engage unnaturally in relation to a perceived response to leader behaviour.

An alternative approach to defining leadership is to describe the differences between leadership and management rather than providing a clear definition per se. Bennis and Nanus (1985) suggested that managers and leaders have different roles, as managers do things right, and

leaders do the right things. This may be true, but as a definition of leadership it is little more than a 'sound bite'. Alternatively, Zaleznik (1977) proposed that managers are worried about 'how' to get things done, while leaders are worried about what things mean to people. This suggests that leaders are more involved with perceptions than practicalities.

An alternative view was suggested by Sashkin (1992), who claimed that management and leadership could be examined by looking at the 'Three Factor Situation Matrix', comprising:

- Behaviour
- Personal characteristics
- Organisational situation

This is known as the 'Three Factor Situation Matrix' (Sashkin, 1982) and suggests that individual leadership is variable and dependent upon the particular situation. However, Fiedler (1967) suggested that it was simply the actions of the person in charge, and he defined leadership as the behaviour or acts carried out by a leader in an attempt to direct and coordinate the work of his group. According to Fiedler (1967), these acts may include structuring the work relations, praising or criticizing group members, and demonstrating concern for their welfare and feelings. If leadership is about 'doing the right things' and management is about 'doing things right' then examination of his explanation would suggest that Fiedler was not talking about leadership, but management. Terry (1960) defined leadership as *'the activity of influencing people to strive willingly for the group objectives'* (p. 5). This suggests that leadership focuses on achieving goals (organisation/team), objectives or targets and is a view supported by Tannenbaum et al. (1959). They defined leadership as *"interpersonal influence exercised in a situation and directed through the communication process towards the attainment of a specialised goal or goals"* (p. 24).

While the review of the literature has demonstrated that the list of suggested definitions of leadership is vast, it can be concluded that there are certain components of leadership which are considered to be universal to the concept. For example, many researchers are in consensus that leadership is a process, involves influence, occurs in groups and involves a set of common goals or objectives (Northouse, 2013). Therefore, for the purpose of this research, the definition put forward by Northouse (2016) will be adopted. This states that “*Leadership is a process whereby an individual influences a group of individuals to achieve a common goal*” (p. 3).

2.6.2 Leadership Theories

As well as reviewing definitions of leadership, a greater understanding of the concept can be gained from reviewing leadership theories. Bass (1990) presented a clear overview of all of the key leadership theories, and he suggested that they fall into five distinct groups. These are listed below, and discussed later in this chapter.

- Personal and Situational Theories
- Interaction and Social Learning Theories
- Theories and Models of Interactive Processes
- Perceptual and Cognitive Theories
- Hybrid Theories

The key theories plotted against time are shown in Table 2.4 and are discussed relative to the Bass (1990) five groups:

Table 2.4 Leadership Theory Time-Line

(The grey shaded areas referring to the periods during which the particular theory was used by researchers)

Theory	Time											
	Pre - 1930	1930	1940	1950	1960	1970	1980	1990	2000	2010 +		
1. Great Man	■	■	■	■	■	■	■					
2. Trait	■	■	■	■	■	■	■					
3. X & Y						■	■	■				
4. Z							■	■	■			

Theory	Time															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
5. Situational																
6. Normative																
7. Contingency																
8. Path Goal																
9. Transactional																
10. Transformational																
11. Visionary																
12. Charismatic																
13. Leader-Member Exchange																
14. Servant																
15. Authentic																
16. Team																
17. Psychodynamic																
18. Women in Leadership																

Table 2.4 shows the beginnings and endings of leadership theories, but in reality, they declined in popularity over time, rather than came to an abrupt ending. All theories are still cited even though some have ceased to be dominant. Therefore, the theories that have declined in popularity (1-8) will be discussed in Appendix 10, whereas the theories that have remained current to some extent (9-18), will be discussed in this section. In addition to this list by Bass (1990), he classified the ‘Skills Approach’ and the ‘Style Approach’ to leadership, which are not mentioned in his classification, but were notable theories in the field, and are also covered in this section.

2.6.2.1 Skills Approach

As noted, whilst not specifically mentioned in the Bass (1990) classification of leadership theory, the ‘Skills Approach’ to leadership signalled an important shift in the development of leadership theory. The Skills Approach to leadership is comparable to the trait approach (see Appendix 10) in that it focused on the leader’s perspective, but it differs in the fact that it moved away from the notion of leadership being an innate capability to something that could be learned and developed.

The main contributor to this theory, Katz (1955), suggested that for effective administration, a leader needs to possess three main skills: Technical, Human, and Conceptual skills. Dependent upon where the individual is in an organisation’s management structure, Katz (1955) argued that some of the skills were more important than others. It was not until the mid-1990s that an empirical basis was developed for the Skills Approach in a study by Mumford, et.al (2000). Their Skills Model of Leadership, which built on the work by Katz, has 5 key attributes and is presented in Figure 2.4.

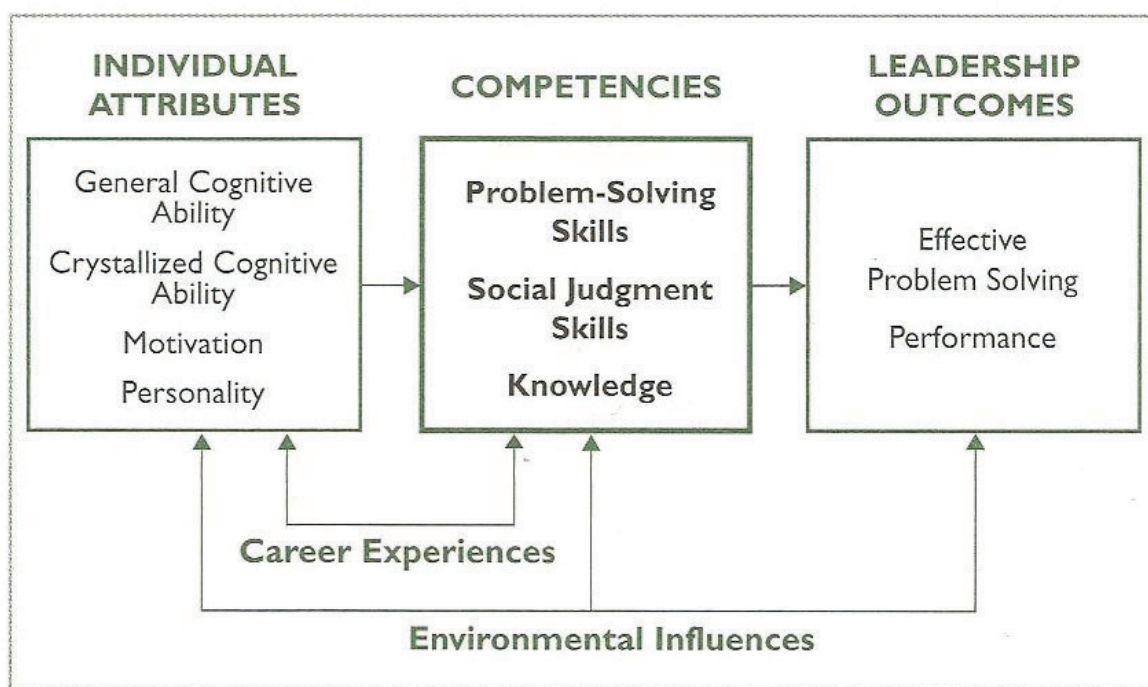


Figure 2.4 Skills Model of Leadership (Mumford et al, 2000)

In their model, Mumford et.al (2000) indicate the relationships between skills and effective leadership. Their model suggests that leadership outcomes are a result of a leaders ‘problem-solving skills and abilities, their social judgement and expert knowledge’. The strength of the skills model of leadership lies in the fact that it is the first “*leader centred model that stresses the importance of developing particular leadership skills*” (Northouse, 2016, p. 29). It also made leadership accessible to everyone through the notion that it is something that can be learnt, developed or honed, as opposed to it being an innate capability.

One of the biggest criticisms of the Skills Approach however, is that it cannot be used to predict the leader's performance based on a particular level of skills (Northouse, 2016), suggesting therefore that other external factors have a role in determining performance.

A further criticism aimed at the Skills Approach is that the range of skills it encompasses goes beyond leadership (Mumford, et al., 2000). For example, it incorporates two forms of intelligence – general cognitive ability and crystallised cognitive ability – which are rarely addressed in the leadership literature outside of the Skills Approach (Mumford, et al., 2000). Also, this model was tested largely on military staff, and therefore it is not clear how this theory applies to other non-military contexts (Mumford, et al., 2000). The Styles Approach which follows this section provides a wider view about the development of the behaviours of a leader.

2.6.2.2 Style Approach

Leadership style can determine the effectiveness of the leader better than traits or skills approaches (Northouse, 2016). The leader's style can influence the overall functioning of the group based on the leader's positive or negative manner in dealing with the organisational members. There have been a number of models of leadership behaviour put forward in support of the style approach such as the Managerial Grid (Blake and Mouton, 1964, 1978) and Action Centred Leadership (Adair, 1973). However, all of these theories are built upon the leadership archetypes described below:

- Autocratic/Authoritarian vs. Democratic/Egalitarian
- Directive vs. Participative
- Laissez-faire vs. Motivation to Manage
- Task vs. Relationship

Authoritarian vs. Democratic/Egalitarian

The Authoritarian vs. Democratic/Egalitarian paradigm presents a conflict of how people should be led, epitomised by the governmental ideologies practised in the West, often centred around the concept of democracy, whilst in other areas of the world totalitarianism has prevailed. In terms of business, Hunt et al. (1988) suggested that a different leadership style is required at different stages of an organisation's life cycle, i.e. that sometimes an autocratic, and sometimes democratic, styles is required. This view is supported by Hersey and Blanchard (1982).

The popularity of this group of leadership theories, which included Theory X and Theory Y, peaked in the 1950s and 1960s (Bass, 1990). At this time, there were numerous studies conducted to determine which of the two opposing styles produced a more successful outcome. Bass (1990) listed the notable studies and concluded that in less mature organisations with low skilled subordinates, Autocratic/Authoritarian leadership worked best, whereas in more mature organisations with more skilled subordinates, a Democratic/Egalitarian style was more suitable. However, much of this research was carried out in military settings or in industrial worker/supervisor environments, which may possibly be less representative of other types of businesses. Nowadays, the leadership theories that fall into this group tend to be less prominent (Northouse, 2016).

Directive vs. Participative

Directive leadership implies that leaders make decisions and direct their subordinates whilst participative leadership implies that subordinates are allowed to contribute to the decision-making and implementation process (Northouse, 2016).

The Directive vs. Participative leadership paradigm fits better with the leadership theories of the 1970s and early 1980s. Research into this type of leadership style attracted the attention of some of the more prominent names in the study of leadership, with publications by Hersey and Blanchard, (1969) Hersey and Blanchard (1972), Sadler and Hofstede (1972), Hunt and Larson (1974) Vroom and Yetton (1973). Despite the number of studies in this area, none provided conclusive proof that either of the opposing styles worked better than the other. This was also concluded by Staw and Cummings (1979) who reviewed the results of a number of investigations into the effects of Directive and Participative styles of leadership; they were unable to find any overall trend to suggest that either style of management affected the productivity or performance of organisations, or that either method was more preferable to the other.

Directive leaders leave little room for consultation, and they provide followers with clear and concise direction on what needs to be done and how to do it. Proponents of this style enjoy the benefits of “directing”, including effective performance, quick problem solving and meeting targets and deadlines – all beneficial to organizational performance overall, at least in the short-term (Sauer, 2011; Cunningham, Salomone, Wielgus 2015; Inandi, Uzun, Yesil, 2016). In the long-term, directive leadership style is not the most effective at garnering motivation and commitment from followers who crave development and progression, as it leaves little room for growth, learning and decision making amongst followers (Sauer, 2011).

Conversely, participative leadership has a main criticism in the fact that the time needed to progress forward is lengthy. In order to offset that opposing result, participative leaders must aim to build very-motivated, but smaller teams (Fiaz et al. 2017).

Laissez-faire vs. Motivation Leadership

The laissez-faire leader allows their subordinates complete freedom to act as they wish, whilst at the other extreme the motivational leader is driven by the desire for recognition or success for themselves or their organisation. It might be assumed that Laissez-faire leadership was detrimental to the performance of subordinates, however this was not found by Bass (1990) who suggested that the freedom given to the subordinates in many cases enhanced their performance. An important component of Laissez-faire leadership was that the leader, having allowed the subordinate to undertake the work how they saw fit, was required to provide feedback to let the subordinate know that there was a need for the job to be done well. Motivational leadership, on the other hand, required constant active involvement of the leader throughout the completion of tasks.

Laissez-faire leaders take a completely hands-off approach with followers. This type of leadership involves the leader stepping away from responsibility, potentially avoiding decision-making/providing feedback and makes little attempt to motivate or develop them (Xirasagar, 2008). Followers are left to self-manage their development, with very little reward or recognition for their contribution.

Task vs. Relationship

The task versus relationship style is the contemporary dominant paradigm. This became prominent in the mid-1960s and is still the most favoured today, and it includes many aspects of Contingency Theory and Situational Theory (Northouse, 2016). Task-focused leadership emphasises getting the job done in a specific way, and to this end direct instructions and supervision are given to the leaders' subordinates. The relationship style emphasises tasks and responsibilities being delegated to the subordinate who has established a good working relationship with the leader. This concern for task vs. relationship has been the subject of

considerable research, and there are widely differing views on the outcomes. Pandey (1976) suggested that relationship-focused, rather than task-focused leaders, obtained better results and this view was supported later by Daley (1986). Conversely Litwin (1968) and Duntzman and Bass (1963) claimed that task rather than individual focused managers were more successful. However, there are a number of writers who, rather than oppose the two styles, identified that the two in unison might deliver the best results, suggesting that what is important is being primarily task-focused, but retaining a degree of concern for the individual (Patchen, 1962; Tjosvold, 1984; Klirnoki and Hayes, 1980).

The Task vs. Relationship paradigm also covers the Blake and Mouton (1964) managerial grid (updated by Blake and Mouton, 1985) and the Hersey and Blanchard (1981) leadership classification methods. Blake and Mouton (1964) supported the 'one best style' approach and suggested that leaders should strive to attain this. Hall (1976) replicated the Blake and Mouton (1964) findings when applying the managerial grid to 731 managers from a range of organisations. Hersey and Blanchard (1981) however claimed that the leader should adapt his approach to suit the maturity of the subordinate and the organisation. Both of these two methods of classifying leadership/management style have been extensively tested. There is no consensus on which, if any, method is the most suitable for the classification of leadership style.

A task-oriented leader will ensure that the work gets done and within a desired timeframe. However, focusing more on the task than on the people can lead to low morale due to a lack of creativity and autonomy in their roles, and can, in the long term, bring innovation to a halt and reduce overall organizational productivity (Friedman, 2003).

Relationship leadership style has also many challenges. From time to time, followers may become overwhelmed with the tasks set for them and will need some extra input from their leader. However, care must be taken to ensure all the focus is not placed on the

manager/follower relationship as this may lead to poor decision outcomes. Instead, the focus must be on the integrity of the business decision under question. Similarly, Griffen & Ebert (2010) feel that relationship orientated leadership is also flawed in that if building team relationships becomes the central focus all other outcomes may suffer as a consequence.

Relationship between Leadership Style and Performance

The relationship between the different leadership styles in each of the groups and organisational performance is discussed by Bass (1990). Much of this has been on specific aspects of leadership which contribute to enhance organisational performance, rather than on developing a generic classification.

According to Bass (1990), there is evidence to suggest that under certain circumstances (for example, short term improvement in performance), an Autocratic/Authoritarian style of leadership is more suitable, whilst for long term improved performance a Democratic/Egalitarian style of leadership should be adopted. Bass (1990) summarises the Directive vs. Participative paradigm, citing numerous studies with conflicting findings, suggesting that there is no conclusive evidence to support one style being any better than the other, in terms of improved organisational performance. In the review, Bass (1990) claimed that a Participative style creates a greater feeling of well-being among the subordinates, and therefore a greater acceptance of change within the organisation.

In the review of Laissez-faire vs. Motivation to manage leadership styles, Bass (1990) claimed that the impact upon performance related to the maturity of the subordinates. Bass (1990) suggested that for lower-skilled/educated subordinates, a Laissez-faire style will be detrimental, whilst being beneficial with the more highly skilled and better educated. With regards to organisational performance and Task vs. Relationship styles, Bass (1990) suggested that the relationship style of leadership improves performance over longer periods of time,

whereas a task style improves performance in the shorter term. This view contrasts that of Hersey and Blanchard (1981) who suggested that a task focused style is more suitable for less mature subordinates and younger organisations, and that a Relationship style is more suitable for a more mature group of subordinates in mid or later stages of the life of an organisation. According to Bass (1990), Likert (1956) undertook a survey of several thousand workers which indicated a tendency for productivity to be higher in the presence of higher-pressure Task-focused Leadership.

However, no evidence was found that could provide any consensus or conclusive evidence that leadership style alone is responsible for the level of an organisation's performance.

2.6.2.3 Visionary Leadership Theory

Visionary Leadership is an extension of Transformational Leadership Theory (which will be discussed in more detail in section 2.6.2.10). Manasse (1986) claimed that visionary leaders “*led the organisation to some new or different state and did not simply maintain the existing situation*” (p. 149). Westley and Mintzberg (1989) suggested that this process had three components: ‘vision, communication, and Empowerment’ (Figure 2.5) and that Visionary Leaders used transformational techniques to achieve their vision.

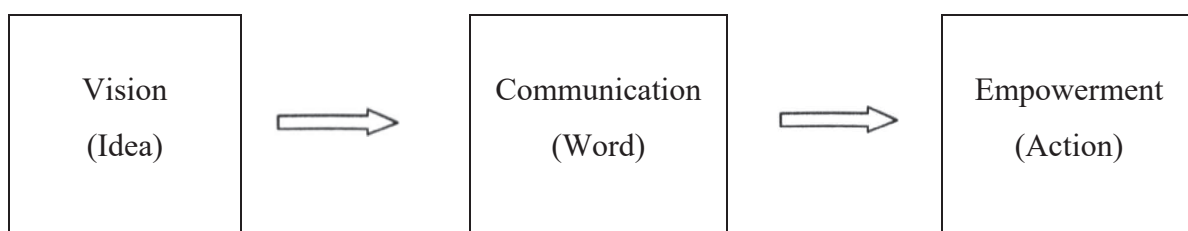


Figure 2.5 Westley and Mintzberg's Visionary Leadership

From their research Westley and Mintzberg (1989) concluded that Visionary Leadership was not synonymous with good leadership and Visionary Leaders were often difficult to work with.

2.6.2.4 Charismatic Leadership Theory

This theory ran in parallel to the other leadership theories in Table 2.4. In the late 1970s House (1976) appeared to have moved on from his Path Goal Theory and started publishing work on Charismatic Leadership. Weber (1925) described Charismatic Leadership as having a “*certain quality of an individual whereby he is considered extraordinary, being endowed with supernatural, superhuman, or at least specifically exceptional powers or qualities*”.

House showed that the concept of Charismatic Leadership was not new by citing earlier studies, such as Weber (1947) Shils (1965) and Staw (1979). He suggested that Charismatic Leaders are individuals “*who by force of their personal abilities are capable of having a profound and extraordinary effect on followers*” (p. 339).

More advocates of Charismatic Leadership include Yukl and Howell (1999). They undertook considerable work and suggested fifteen propositions which set out when, and in what form, Charismatic Leaders would arise. Their work was extensive and drew considerable attention in both support and opposition (Conger, 1989; et al, 1988; Conger and Kanungo, 1987; Greiner, 1972; Kunda, 1992; Ouchi, 1980; Pawar and Eastman, 1997; Kotter and Heskett, 1992; Schein, 1992; Katz and Kahn, 1978; Collins, 2001, Salvaggio, and Kent, 2016). Tuan & Thao (2018) stated that “*Charismatic leaders demonstrate a great desire to change the status quo and a high sensitivity to environmental opportunities, constraints, and subordinates’ needs*” (p. 110).

Charismatic leaders evoke motivation and inspire performance through their charm, personality and charisma. They are excellent at influencing through communication, and also at connecting with their followers on an emotional level. However, some believe that although charismatic leaders may be good in the short-term in rallying commitment and motivation, they could be destabilizing in the longer term, as they can be seen to talk the talk, and put too

much emphasis on charisma versus organizational processes (Meindl, Ehrlich & Dukerich, 1985).

2.6.2.5 Leader-Member Exchange Theory

Leader Member Exchange Theory (LMX) presents leadership as a process that relates to all the interactions between leaders and followers (Liao et al., 2017; Salvaggio, and Kent, 2016). Originally called Vertical Dyad Linkage Theory (VDL) (Liao et al., 2017; Salvaggio, and Kent, 2016), researchers identified two general types of relationship, the '*in group*' and the '*out group*'. The '*in group*' related to extended roles and responsibilities while the "*out group*" referred to the defined contractual roles. Relationships within the in-group are characterised by 'mutual trust, respect, liking, and reciprocal influence', whereas relationships within the '*out-group*' are characterised by formal communication in line with job descriptions.

Leader Member Exchange Theory suggests that the process of leadership helps to generate effective relationships between the leader and follower in their respective work units (Graen & Uhl-Bien, 1995). Studies have shown that there are many benefits of high quality leader member exchanges including: "reduced employee turnover, more positive performance evaluations, higher frequency of promotions, greater organisational commitment, more desirable work assignments, better job attitudes, more attention and support from the leader, greater participation, and faster career progress over 25 years" (Graen & Uhl-Bien, 1995).

Criticisms of the theory underlying Leader-Member Exchanges (LMX) come from the potentially negative consequences that spring from differential treatment of subordinates (Othman et al., 2010). The actual quality of social exchange will have an impact on the leader's reward and resource allocation decision, meaning that '*in-group* members will likely be preferred' (Othman et al., 2010). This can be viewed by outgroup members as unjust, and can

lead to them treating the process with less respect and even to actively undermining the performance of the group as a whole (Liden et al., 2006). Another suggested issue is the negative impact that LMX can have on employee performance – both from the out-group, who are demotivated, and the in-group, who burn out under their perception of high expectations. Critics have suggested that the relationships in LMX, based on evident differentiation, are likely to lead to employee indifference, poor job satisfaction, and organisational injustice. The consequences can be, therefore, damaging and potentially irreversible (Othman et al., 2010).

2.6.2.6 Servant Leadership Theory

Servant Leadership is based around a leadership approach which focuses on the leader and his or her behaviours. Its central concept that *altruism* is at the centre of the leadership process and that the leaders should be “*attentive to the concerns of their followers, empathize with them, and nurture them*” (Northouse, 2015; p. 219). Servant leaders “*put followers first, empower them, help them develop their full personal capacities, and embrace their growth*” (Northouse, 2015, p. 219).

This leadership approach, first developed by Greenleaf (1970), is a unique approach in that it is the only leadership approach that frames the leadership process around the principle of caring for others. It also puts strong emphasis into ethical, moral and community obligations of the leader (Northouse, 2016).

Greenleaf’s perceived his development of servant leadership to be nothing more than a “*set of loosely defined characteristics*” (Greenleaf, 1970), and so it has since been adapted as a *leadership approach* as opposed to a full *leadership theory*. However, some researchers have focused on clarifying and extending the concept of servant leadership. For example, Van Dierendonck (2011) aimed to identify the core dimensions of the Servant Leadership process. Some researchers believe servant leadership to be a “*trait phenomenon*” meaning an individual

is born with the characteristics to lead in such a way. Other schools of thought see it as a “*behaviour process*” whereby the leader serves and helps others. Table 2.5 highlights the vast number of characteristics related to Servant Leadership. Researchers have not been able to agree on a definite, exhaustive list of characteristics which make up servant leadership theory (Van Dierendonck, 2011).

Table 2.5 Van Dierendonck’s Key Characteristics of Servant Leadership

Laub (1999)	Wong & Davey (2007)	Barbuto & Wheeler (2006)	Dennis & Bocarnea (2005)	Sendjaya, Sarros, & Santora (2008)	Van Dierendonck & Nuijten (2011)
<ul style="list-style-type: none"> *Developing people * Sharing leadership * Displaying authenticity * Valuing people * Providing leadership * Building community 	<ul style="list-style-type: none"> * Serving & developing others * Consulting & involving others * Humility & selflessness * Modeling integrity & authenticity * Inspiring & influencing others 	<ul style="list-style-type: none"> * Altruistic calling * Emotional healing * Persuasive mapping * Organizational stewardship * Wisdom 	<ul style="list-style-type: none"> *Empowerment * Trust * Humility * Agapao love * Vision 	<ul style="list-style-type: none"> *Transforming influence * Voluntary subordination * Authentic self *Transcendental spirituality * Covenantal relationship * Responsible morality 	<ul style="list-style-type: none"> *Empowerment * Humility * Standing back * Authenticity * Forgiveness * Courage * Accountability * Stewardship

Liden, et al. (2008) argue that building a culture of servant leadership in an organisation is dependent on selecting leaders who are able and willing to foster long term relationships with their followers.

Amongst the criticisms noted by Hunter (2004) was that servant leadership encourages passivity, a more widely held criticism that perhaps rests on the negative connotations of the

actual term ‘servant’ (Johnson, 2001). Servant leadership also moves away from the established paradigm, labelled as unrealistic and not in keeping with peoples’ egocentric natures and assertiveness. In effect, it potentially threatens those wielding or seeking power within a more traditional hierarchical structure (DiStefani, 1995).

Northouse (2016) suggested there was a general lack of evidence to be found on the theory within academic literature. It is true to conclude that much of what does exist was developed in the 1970s, while more recent material largely focuses on Greenleaf’s original writings rather than testing the theory.

2.6.2.7 Authentic Leadership Theory

Authentic leadership is one of the most modern and contemporary of the leadership theories which is still in its developmental stage (Gill and Caza, 2018). Its popularity has increased in recent times due to the perceived demand for leaders who are both “trustworthy” and “real” (Northouse, 2016). It has been described in the literature as being a complex process and this is evident in the fact that there is no consensus among researchers on the definition of authentic leadership (Northouse, 2013). Authentic Leadership is measured by the Authentic Leadership Questionnaire (ALQ) (Avolio, et al. 2018). Authentic leadership has three different perspectives: *Intrapersonal, Interpersonal and Developmental*.

Shamir & Eilam (2005) described the ‘intrapersonal’ approach as being solely about the leader in terms of their “*self-knowledge, self-regulation and self-concept*”. It is the leader’s life experiences and interpretation of the meaning of these experiences that shapes their authenticity, and enables them to lead with conviction while appearing to be genuine (Northouse, 2016).

Eagly (2005) describes the '*interpersonal*' approach as being relational in nature due to the bond created between the leader and the follower as a result of their interactions with one another. The authentic leader is very much influenced by his followers and authenticity is often considered to be a reciprocal process between leader and follower (Northouse, 2016).

The "*developmental*" approach to authentic leadership is exemplified in the work of Avolio and his associates (Avolio & Gardner, 2005; Gardner, Avolio & Walumbwa, 2005; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008, Avolio, et al. 2018). They describe authentic leadership as not a fixed trait, but one that can be developed and nurtured over a lifetime, or that can be triggered after a life changing event. Walumbwa et al (2008) further conceptualised the development approach to authentic leadership by stating that authentic leadership consists of four closely related components: 'self-awareness, internalized moral perspective, balanced processing and relational transparency.

There are two practical approaches to Authentic leadership, namely The Terry Theory (1993) and the George Theory (2003). The Terry Theory (1993) is a guide for "how to do" authentic leadership and provides specific actions. The Authentic Action Wheel enables leaders to address 'what is really going on' in a situation and determine what is the 'right thing' to do for everyone involved (Northouse, 2016). The Terry theory focuses on actions, the George Theory (2003) however, focuses on five characteristics of authentic leaders, "purposeful, value centred, relational, self-disciplined, and compassionate".

Walumba et al (2008) developed a more theoretical approach to authentic leadership in order to produce a framework and identify a set of characteristics that would encompass authentic leadership. They identified four attributes that were common among authentic leaders, "self-awareness, an internalised moral perspective, balanced processing, and relational transparency".

The strengths of authentic leadership are the fact that the approach is timely and it fills the need for leaders who are trustworthy and genuine. There are also many positive impacts of authentic leadership; research looking at employees and their supervisors found that the more authentically the leaders behaved, the more the employees were able to identify with them, feelings of empowerment in the work place increased, engagement in their roles increased, and organisational citizenship behaviours increased (Walumbua et al, 2008). The weakness of authentic leadership is that it is still in its formative phase of development. Researchers of the theory have identified that further work is needed to properly define and measure attributes of Authentic Leadership. This might include exploring how the theory is viewed in different cultural contexts and situations (Avolio, Walumbwa, & Weber, 2009).

2.6.2.8 Team Leadership

The effectiveness of leadership in relation to organisational teams is currently an important topic in the field of leadership studies. A team, as defined by Northouse, (2016) is “*a specific type of group composed of members who are interdependent, share common goals, and coordinate their activities to accomplish these goals*” (p. 363). Examples of teams in an organisational setting include ‘*project management teams, task forces, work units, standing committees, quality teams, and improvement teams*’ Northouse (2016, p. 364). Each team will have its own purpose within the organisation, and each team member will have their own specific role (Levi, 2011).

The concept of teamwork, while becoming prominent in more recent times, actually has its origins in the 1920’s. Early research on teamwork centred on collaboration efforts in the workplace as opposed to the focus on individual efforts (Porter & Beyerlein (2000). This collaborative approach was then developed in later years to include group dynamics, social

science theory, sensitivity training, and the role of leadership within these groups (Northouse, 2016).

Focus shifted again in the 1960's and 70s due to increased competition and towards improving team and leadership effectiveness. The benefits of having a team based organisation meant that they could react quicker to changes in the business environment and thus remain competitive. Other advantages of team-based organisations include; *'greater productivity, a more effective use of resources, better decisions and problem solving, better-quality products and services, and greater innovation and creativity* (Northouse, 2013, p. 208).

More recent studies on team research are more complex in nature and have focused on making the organisational culture more receptive to a team work context. Teamwork variables such as *"affective, behavioural, and cognitive processes in team success and viability"* and *"The role and impact of mediating processes such as trusting, bonding, planning, adapting, structuring, and learningin terms of team performance and viability"* have been identified (Ilgen, et al 2005, p. 519).

Researchers are advocating further research in the field of team leadership which focuses on 'leader-team interactions' as opposed to the traditional 'leader-follower' interactions (Zaccaro et al, 2009) as well as focus on the process of how the leader helps to develop teams with critical capabilities (Northouse, 2016).

A prominent model of team leadership is the 'Hills Model for Team Leadership' (Figure 2.6).



Figure 2.6 The Hill Model of Team Leadership

This model places great emphasis on the role of the leader in team effectiveness and is designed to be a ‘mental road map’ for the leader to help monitor the team and take corrective action where necessary (Northouse, 2016). The leader is based at the top of the model whereby their actions ultimately lead to team effectiveness in terms of performance and development. However, the model also takes into account other components such as task, relational and environmental factors.

The main strengths of this model are that it is applicable to real life team leadership situations taking into account the environmental context of the team. The fact that it provides a ‘mental model’ of team leadership is also useful to leaders as it provides a ‘cognitive guide’ that relates to the development and management of effective teams. Its weaknesses include the fact that it is not an exhaustive list of team leadership factors and the reality is that there may be more factors which are needed to be considered in relation to team based leadership decision making.

It is also a complex model which does not give ‘on the spot answers’ to team leadership problems. The leaders must use the framework in conjunction with their specific problem and then come up with a plan of action. This process may not come naturally to many leaders and will take time (Northouse, 2016).

2.6.2.9 Psychodynamic Theory

The psychodynamic approach to leadership is based on the impact of personality traits on leadership. In particular, how personality traits affect the relationships between the leader and followers. Both leaders and followers have a ‘personality type’ based upon their personality traits, and that will determine and effect their relationship. As personality is formed in childhood, it is very difficult to change. Leaders therefore need to understand their own personality, and how it will affect their followers (Northouse, 2016).

A key model of Psychodynamic Leadership Theory is transactional analysis (TA). Developed by Berne (1961), TA is defined as a “*a unified system of individual and social psychiatry*”. While not directly linked to leadership, its main components can be used in leadership to explain leader-follower behaviour. According to Berne (1961), there are three ego states in TA: parent, adult or child. Ego states are defined as “*a coherent system of feelings and operationally as a set of coherent behaviour patterns*” (p. 23). For example, when a person exhibits a feeling or behaviour that they have learnt from a parent, they are considered to be in parent ego mode; when they exhibit a feeling or behaviour they have learned in childhood, they are in child ego mode; if they exhibit a feeling or behaviour based on whatever is happening around them, this is considered to be adult ego mode (Northouse, 2016). The main premise behind this theory is that both the leader and the follower must be operating in the adult ego state to develop an effective relationship. Therefore, the main benefit of TA is in analysing interactions and improving them.

Sigmund Freud (1975) was a luminary figure in the field of psychoanalysis. He proposed three personality types, 'erotic', 'obsessive', and 'narcissistic' which he believed essentially characterised all human beings. Erotic personality relates to the need to love and be loved; obsessive personality relates to people who live by rules and structures and like stability; narcissistic personality concerns care only for yourself and does not take into account the views of others.

Maccoby (2003) furthered the ideas of Freud when he attempted to distinguish between productive and unproductive versions of each Freudian personality type. Maccoby (2003) suggested that the best leaders were 'productive narcissists' as they can direct their clear vision onto the organisation especially in times of crisis (Northouse, 2016).

While Sigmund Freud's theories have weakened in recent years, his protégé Carl Jung has also contributed significantly to personality types (Jung, C. G., 1993). Jung firmly believed that human behaviour was entirely predictable. He identified that people had preferences as to how they think and feel and that these would influence how they worked and related with others. His work became the basis for the four-factor classification of personality:

- “1) Extraversion vs. introversion: does a person derive energy externally or internally?”*
- 2) Sensing vs. intuiting: does a person gather information in a precise or in an insightful way?”*
- 3) Thinking vs. feeling: does a person make decisions rationally or subjectively?”*
- 4) Judging vs. perceiving: does a person live in an organised or a spontaneous way?”*

Kroeger and Theusen (2002) subsequently took Jung's classification of personality and matched them to leadership strengths and weaknesses. The results are shown in Table 2.6.

Table 2.6 Kroeger and Theusen's Psychological Preferences and Leadership

Preference	Leadership Pluses	Leadership Minuses
Thinker	Objective Rational Problem solver	Critical Demanding Insensitive
Feeler	Empathic Cooperative Loyal	Indecisive Changeable
Extravert	Energizing Communicative Open	Communication overload
Introvert	Quiet Reflective Thinking	Slow to decide Hesitant
Intuition	Strategic thinker Future oriented	Hazy Nonspecific
Sensor	Practical Action oriented	Unimaginative Detail oriented
Judger	Decisive Sticks to plans	Rigid Inflexible
Perceiver	Flexible Curious Informal	Scattered Unfocused

What is interesting from the Kroeger and Theusen (2002) study is that there is no superior type of personality/leadership combination; there are both positives and negatives for each type.

The main strengths of the psychodynamic theory lie in the fact that it takes into consideration that both the leader and the follower have a personality that will influence their behaviour. It is also a very humanistic approach to leadership in that it promotes “self-awareness and tolerance for the styles and behaviours of others” (Northouse, 2016). Weaknesses include the fact that most of the Freudian theories were based on people with mental illness and so subsequently the TA theory is also questionable. Also, the psychodynamic approach is limited in that while it focuses on the behaviours of the leader and follower it does not take into account organisational factors (Northouse, 2016).

2.6.2.10 Transformational and Transactional Leadership Theory

Transformational and Transactional Theory was formalized first by Downtown (1973) and then by Burns (1978) who was credited as the leading proponent. According to Burns (1978), “*the transforming leader recognises and exploits an existing need or demand of a potential follower..., identifies potential motives in followers, seeks to satisfy higher needs, and fully engages the follower*” (p. 4). Both Downtown and Burns suggested that transformational leaders gauge the abilities of all of their followers to be able to complete their current commitments, whilst also planning for their future responsibilities.

According to Bass (1985), Transformational Leadership Theory differed from Transactional Leadership in that Transactional Leaders exchanged results for rewards, whereas Transformational Leaders sought to change the existing status for something perceived as better. Transformational leaders asked subordinates to rise above their own self-interests for the common good of the organisation. According to Bass (1985) and Burns (1978), Transformational Leaders were acclaimed by their followers as the ideal leaders and the ones whom they should seek to emulate. Nazarian et al. (2017) claimed that “transformational leadership is expected to have a greater impact on organisational performance when compared to other leadership styles” (p. 1082).

This is in contrast to the Transactional leader, who expects followers to work towards pre-agreed objectives and who does not encourage followers to take any responsibility towards developing themselves or others. Any exchanges occurring between the followers and the leader can be classed as transactional leadership (Northouse, 2016). Transactional leaders have a strong ability to highlight “*responsibilities, their performance objectives, and their tasks that must be completed*” of their followers (Eptropaki and Martin, 2005, p. 572). Transactional leaders are able to provide instructions in relation to tasks and shape the role expectations which

allow the followers to achieve their goals (Armandi et al, 2003). Incentives such as increased salary and promotion are also used by transactional leaders in order to shape outcomes (Jung et al, 2008). It has also been argued that transactional leaders also have a tendency to focus on efficiency (Levy et al, 2002).

The advantages of transformational leadership theory according to Northouse (2016) include that it has been researched extensively in many different situations both academically and practically. It is also a popular approach to leadership as it encapsulates society's idea of how a leader should be. It also very much promotes the leadership process as being between the leader and also the follower and in particular focuses on elevating the needs of the followers (Anderson & Sun, 2017). Its disadvantages include that it encompasses a wide range of leadership activities and characteristics, and therefore it is difficult to define exact parameters (Northouse, 2016). It is also argued that transformational leadership also sets itself to be almost trait like in nature, implying that it cannot be learned or developed.

Burns (1978) suggested that whilst Transactional and Transformational leadership styles are polar opposites, they often augment each other. However, not all the researchers agreed with the views of Burns and Bass. For example, Beyer and Browning (1999) argued that despite considerable research on transformational and transactional leadership, there was no supporting evidence that either was capable of transforming organisations. This view was supported by House and Aditya (1997) who claimed that whilst transformational leaders did evaluate the potential of the followers, there was no evidence to support the argument that they transformed the individuals within organisations. Despite this, the concept of transformational leadership was in full flow by 1985, and Bass (1985) stated "*that to achieve follower performance beyond ordinary limits, leadership must be transformational*" (p. xiii). Thus, Transformational

Leadership became the prominent representative theory and remains the dominant paradigm (Dvir et al. 2002).

Some researchers have taken this theory of Transformational/Transactional leadership and have developed it further (Yukl, 1999). One of the most important versions that generated the most research is the Full Range Leadership Model (FRLM) (Avolio, 1999; Avolio and Bass, 2002; Yukl, 1999) and comprises of laissez-faire, transactional and transformational leadership. According to this model, which positions these dimensions in the order of a continuum (Figure 2.7), transformational leadership is the pinnacle of leadership behaviour and encourages people to work towards the common good as opposed to serving self-interest (Bass, 1985a, 1990; Bass and Avolio, 1994).

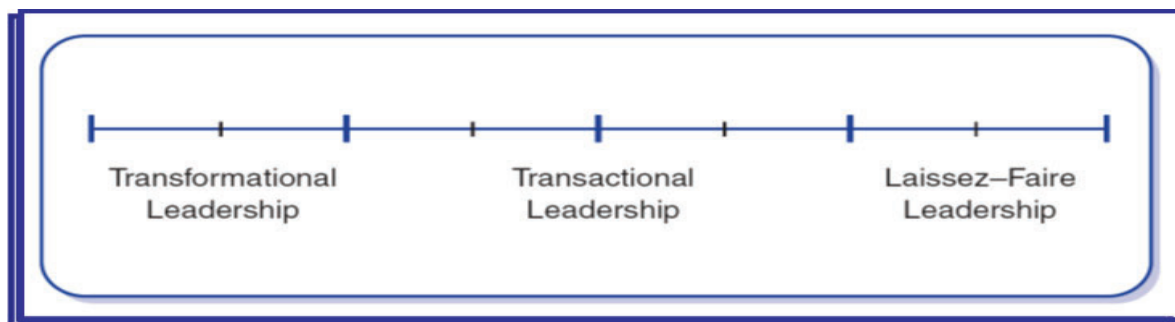


Figure 2.7 Leadership continuum (Avolio and Bass, 2002)

These three component parts each also has sub-dimensions which are presented in Figure 2.8. Definitions from Bass (1985) of each of these component sub-dimensions are given below.

TRANSFORMATIONAL LEADERSHIP	TRANSACTIONAL LEADERSHIP	LAISSEZ-FAIRE LEADERSHIP
<p>Factor 1 Idealized Influence Charisma</p> <p>Factor 2 Inspirational Motivation</p> <p>Factor 3 Intellectual Stimulation</p> <p>Factor 4 Individualized Consideration</p>	<p>Factor 5 Contingent Reward Constructive Transactions</p> <p>Factor 6 Management-by-Exception Active and Passive Corrective Transactions</p>	<p>Factor 7 Laissez-Faire Nontransactional</p>

Figure 2.8 Sub-Components of Transformational Leadership Categories

Transformational leadership includes four dimensions; ‘idealized influence (attribute and behaviour)’, ‘inspirational motivation’, ‘intellectual stimulation’, and ‘individualized consideration’. *Idealized influence* relates to the extent leaders are seen as role models and their ability able to inspire others (Moss and Ritossa, 2007). Bass et al (2003) argued that followers would identify with such leaders as they are respected individuals who can gain the trust and admiration of their followers. *Inspirational motivation* relates to the ability of the leader to convey an attractive and encouraging vision (Judge and Piccolo, 2004). The leader’s ability to view the future with optimism helps the followers to engage with tasks better (Antonakis et al, 2003). Encouraging followers to be more creative and innovative is the main component of *Intellectual stimulation* (Limsila and Ogunlana, 2008). Yukl (2006) described *Individualized consideration* as leaders providing tailored support and encouragement to their followers.

Transactional leadership consists of three dimensions: ‘contingent reward’, and ‘management-by-exception’ in both ‘active’ and ‘passive’ forms. *Contingent reward* is embedded within the

reward in exchange of follower's ability and efforts to meet organisational objectives. Limsila and Ogunlana (2008) argue that leaders must clearly voice their expectations and formally recognise when the organisational goals have been met (Yukl, 2006). The 'active' mode of *Management-by-exception* requires the leader to look for mistakes or role violations amongst their subordinates; Northouse (2016) discusses the importance of corrective actions before the behaviour that is being changed creates further difficulties (Judge and Piccolo, 2004). The 'passive' nature of *Management-by-exception* results in leaders being reactive, and waiting for problems before taking corrective action (Judge and Piccolo, 2004; Bass and Avolio, 1994). These leaders only take corrective action when it is too late (Pounder, 2001).

When the leaders view their followers indifferently, this 'non-leadership' or *Laissez Faire* approach offers no support to the followers (Kirkbride, 2006; Moss and Ritossa, 2007). This is considered as the most inefficient style of leadership.

Researchers view transformational leaders as being the most influential, inspirational motivational, and humanistic (Avolio & Bass, 2002). They are described as being involved in the life of the organisation as well as the lives of people working for them. Their main focus is rooted in the needs for the future and they view themselves more holistically as an individual (Avolio, Waldman, & Einstein, 1988; Bass, 1990). With goal orientation in mind, transformational leaders set objectives, monitor and control the organisational (Avolio and Bass, 2002).

A number of studies have proven the superiority of transformational over transactional styles of leadership (Avolio and Bass, 2004; Dvir et al, 2002; Erkutlu, 2008; Northouse, 2007; Waldman et al, 2001) with the main premise that transformational leadership results in greater performance that is beyond expectation (Avolio and Bass, 2004; Erkutlu, 2008; Limsila & Ogunlana, 2008).

A potential issue which has been discussed earlier, is the notion of combining the approaches. This combination of the approaches from transactional to transformational leadership enables one to see which approach brings out the best in followers and whether the environment is currently conducive of effective performance from the followers. In their development of the model, Bass and Avolio (2004) clearly identified differences between the two styles, but more importantly they argued *“that transformational leadership is not a substitute of transactional leadership rather it augments transactional leadership in achieving the goals of the leaders, associate, group and organisation”* (Avolio & Bass, 2004; p. 21).

With regards to laissez-faire leadership, Northouse, (2016), stated *“the laissez-faire leader takes a ‘hands-off, let-things-ride’ approach”*. This leader abdicates responsibility, delays decisions, gives no feedback, and makes little effort to help followers satisfy their needs. There is *“no exchange with followers or attempt to help them grow”* (Northouse, 2016; p.172). Wong et al., (2018) pointed out that, *“Empowering leadership and laissez-faire leadership are generally thought to represent quite different leadership styles—the former more active and directed in follower development and the latter more passive and dismissive of followers’ needs”* (p. 757).

The FRLM model theorises that transformational leadership elements are more effective than the elements of transactional leadership.

“Actively taking corrective action is generally less effective and satisfying for both leaders and followers. However, most ineffective and dissatisfying is laissez-faire leadership, wherein the individual avoids leadership and abdicates responsibility” (Avolio, 2010; p. 67).

The Full Range Leadership Model is presented in the form of continuum in Figure 2.9 below.

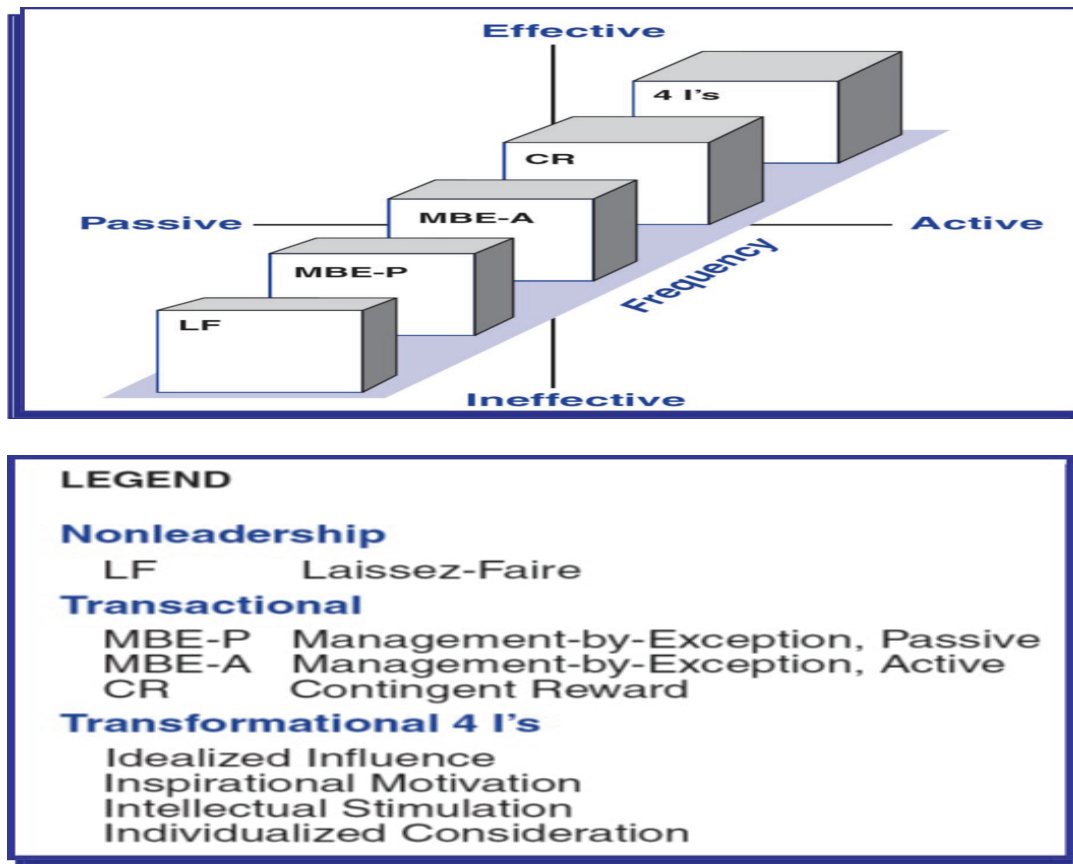


Figure 2.9 Full Range Leadership Model Continuum

The Multifactor Leadership Questionnaire (MLQ) is an established instrument which is used to measure leadership profile based on the Full Range Leadership Model, and was developed by Avolio and Bass (2004) alongside the model. It has been extensively researched and validated in numerous settings. The main focus of the Multifactor Leadership Questionnaire (See Appendix 6 - Part 2) was to determine the degree to which leaders exhibited transformational, transactional leadership or no leadership at all, but in addition it determined the degree to which the followers were 'satisfied' with the effectiveness of their leader.

The MLQ measures the outcomes of leadership by measuring 'extra effort', 'individual', 'group and organisational effectiveness' and 'followers' satisfaction'. The MLQ comprises of two parts: one for self-assessment by the leader of themselves, and the same questions

completed by the followers, in order to achieve 360 degree coverage. The MLQ instrument consists of 45 questions, each using a 5-point Likert-type scale, and can be completed online or manually. The questions in the MLQ aim to identify the frequency leaders exhibit 32 specific behaviours.

The benefit of the MLQ is that it measures a range of leadership types, from passive to contingent reward, to transformational. Its dis-benefits include the fact that the four factors of transformational leadership correlate very highly with each other and with other components of the transactional and laissez fair model, and so may not be distinct factors in their own right (Northouse, 2016).

2.6.2.11 Conclusion on Leadership Theories

The key leadership theories have been explained and discussed in order of their origins. The evolution of leadership theories somewhat mirrors the trends and fashions in business; for example, in the last part of the nineteenth and early part of the twentieth centuries, business was dominated by individuals whose own abilities and attributes were synonymous with the ‘Great Man’ theory and ‘Trait’ theory, both of which were dominant at that time. Towards the middle of the twentieth century, organisations owned and run by individuals were replaced by businesses that were large corporate entities run by a board of directors and tiered management teams. Under this new environment, it is easy to see why ‘Situational’, ‘Normative’, and ‘Contingency’ theories, with their focus on order, structure and productivity, were favoured by researchers. Towards the end of the twentieth century businesses changed, possibly due to the rise of Asian and Far Eastern influences on technology, which resulted in leadership theories focusing on ‘output from incentive’. This incentive could be material, in the case of

Transactional Leadership or something more meaningful, as in the case of Visionary Leadership.

It can be concluded therefore that leadership theories appear to be 'of their time' and for this reason none appear to have the 'answer' if such a thing to exist. Conversely, it could be said that none of them have been 'proven' to be redundant. Thus, it is suggested that in studying leadership it is necessary to consider all aspects of the individual leader and the particular situation they are operating in, before arriving at any conclusion on an individual's style and its appropriateness to the situation.

In relation to the context of this research, the literature review demonstrated that the Full Range Leadership Model is one of the most validated theories on leadership style (Kirkbride, 2006) and it is appropriate theory to explore alongside the concept of cultural intelligence. This is because, firstly, the Full Range Leadership Model demonstrates a broad view of leadership and leadership styles. Research on leadership styles in the UAE and the UAE education sector are under-researched as the majority of leadership research is carried out from a Western perspective and not from the prospective of Non-western or developing world countries. As the study of leadership style is highly influenced by context and culture, the predominate leadership style from country to country will differ (Shah, 2006; Shahin & Wright, 2004). Caution must therefore be taken when applying research which has been developed in western countries into a non-western or developing world country setting as some modification may be required (Rodwell, 1998). Therefore, it is believed that this model will encompass a full and broad understanding, using a well-known and well used instrument that has been validated across many settings.

The following section will look at the notion of leadership style adaptability.

2.6.3 Leadership and the Ability to Adapt

The concept of Adaptive Leadership can be seen as relating to, and drawing from, the many personal and professional challenges faced by leaders. It has been termed a ‘theory of practice’, and was pioneered by Heifetz (2004), of the Kennedy School of Government, Harvard, in his primary work, “Leadership Without Easy Answers” (Heifetz, 2004). Over more than a decade, Heifetz has further refined and expanded the concept through public lectures, interviews, and his co-authored work, ‘Leadership on the Line: Staying Alive Through the Dangers of Leading (2002).

At its most fundamental level, the approach developed by Heifetz seeks to distinguish technical problems from adaptive challenges, thereby producing nine distinct qualities of an adaptive challenge (Heifetz, 2004). This idea is based on the theory that all people experience a sense of loss or reduced effectiveness as a result of change. As a result, they will tend to avoid adaptive work through distraction, avoiding the problems that produce the greatest frustration or workplace conflict.

As a leader, therefore, this creates a need to effectively compel people to take on more responsibility, embracing a greater commitment to the work they are undertaking. This needs to be achieved in a happy middle-ground between, at one extreme, feeling overwhelmed and, at the other, becoming stagnant.

Leadership of this nature necessitates an approach to learning that is effective - with or without strategy or authority. This needs to engage employees to face challenges, in the process questioning their perspectives and assumptions, while adjusting their values and encouraging new and good habits to form. Today’s leaders need to respond to the adaptive demands upon them by taking responsibility before they are called upon; leading with questions already in

hand, and the competency needed to achieve targets.

After Heifetz developed these basic theoretical concepts, Adaptive Leadership has become an increasingly explored leadership approach in both the academic and corporate world. It is now a broader set of strategies and practices that can support individuals and organisations to push through workflow hold-ups, force through change, and develop their adaptability to work better in multifaceted, challenging situations.

2.6.3.1 Adaptive Leadership's distinctive properties

Leader adaptability relates to a leader's capacity to adjust their thoughts and behaviours to develop responses to new or changing decision-making situations (Luu, 2017).

Adaptive leadership, as an approach to leadership, demonstrates some distinct qualities and differences in its underlying focus (Lawrence, 2006). These include:

1. The concept of leadership revolves around understanding, behaviours, and actions. It can, therefore, be learned, and is not an innate trait (such as, for example, charisma).
2. An organisation's ability to adapt rests on it possessing widespread leadership that can emanate from across an organisation – not simply from those at the top.
3. Lawrence (2006) suggests that there is an inherent danger and difficulty to leading through adaptive change, as such change almost inevitably generates resistance. As a consequence, Adaptive Leadership relies on understanding adaptive pressures and dynamics, and then applying those insights to greater success in leading through the change.

Wong & Chan (2018), describe their interpretation of Adaptive Leadership as “*The roles of adaptive leaders are different from those of the traditional view, which focuses on providing*

vision, solutions, and directions to relatively passive followers under the leaders' protection. Instead, adaptive leaders work together with the team to bring out tough issues, challenge established practices, and involve people at all levels to learn their ways to solutions. Followers are actively engaged in the change process to experiment and to learn. Therefore, in the adaptive model, leadership is a practice rather than a position or a job" (Wong & Chan, 2018; p.106).

Adaptive Leadership can be viewed as aiming to appropriately alter behaviour as the situation changes. This has been expressed in a wide variety of ways – ‘flexible’, ‘adaptable’, ‘agile’, ‘versatile’ – but all aim to describe a leader who is capable of accurately understanding a particular situation and modifying their behaviour accordingly (Kaiser, Lindberg, & Craig, 2007; Pulakos, Arad, Donovan, & Plamondon, 2000, Wong & Chan 2018).

There still remains a considerable lack of clarity in leadership and management writing about the actual nature of Adaptive Leadership, as well as how it might best be assessed. Part of this ambiguity arises from the fact that Adaptive Leadership can occur in a variety of contrasting contexts. Consider, for example, where flexibility is required within the same position when conditions alter for a leader. Similarly, flexibility is also needed when moving between leadership positions with different demands and challenges (Northouse, 2016). Measuring the concept of adaptability is also a challenging task that is dependent on many factors. For this reason, it was felt that it would be prudent for the researcher to develop a tool for measuring leadership adaptability that would be suitable for the specific context.

It is the rising pace of change within all organisations that is prompting such focus on Adaptive Leadership from managers and administrators (e.g. Burke & Cooper, 2004; Dess & Picken, 2000). A multitude of factors and variety of changes will increase the requirement on leaders to demonstrate flexibility and innovation. These include: ever-increasing globalisation and

international commerce; the pace of technological change; shifting cultural values; diverse workforces; increased use of virtual interaction; social networking; increased use of outsourcing; rising focus on issues such as CSR, the environment, and sustainability; and the heightened visibility of leadership actions (e.g. Burke & Cooper, 2004).

Despite this extensive list of leadership pressures, the quantity of academic and professional research focused on the issue of Adaptive Leadership remains limited in scope. At the same time, the weight of these factors is broadening interest in the subject as its relevance becomes ever-more obvious.

2.6.3.2 Background of previous research on Adaptive Leadership

When Heifetz formulated the concept and leadership approach of Adaptive Leadership in 1994, he described a set of criteria for how leaders succeed in maintaining their authority throughout adaptive situations. Heifetz (1994) produced a spectrum of five dimensions required of leaders with authority, from a position that distinguishes between technical and adaptive models of leadership.

Table 2.7 Heifetz (1994) Leadership with Authority in Adaptive Situations Model, p. 127

	Social Function	Situational Type
	Technical	Adaptive
Direction	Leader provides problem - definition and solution	Leader identifies the adaptive challenge, provides diagnosis of condition, and produces questions about problem definitions and solutions
Protection	Leader protects from external threat	Leader discloses external threat

	Social Function	Situational Type
Role Orientation	Leader orients	Leader disorients current roles, or resists pressure to orient people in new roles too quickly
Controlling Conflict	Leader restores order	Leader exposes conflict or allows it to emerge
Norm Maintenance	Leader maintains norms	Leader challenges the norms or allows them to be challenged

In the ‘The Dilemma of Foundation Leadership’, Heifetz, Kania, and Kramer (2002), extended the developmental analysis of the distinction between technical and adaptive solutions in leadership. This provided an alternate consideration of the more traditional understanding of leadership which, in recent years, has been supplanted by a far more refined and dynamic view of social change. In it, Heifetz, Kani and Kramer (2002) suggest people and organisations tasked with leading are not expected to simply have the answer and bear all responsibility for problem solving. Instead, they are required to establish and sustain the conditions through which all stakeholders can take on all necessary responsibility to tackle hard challenges, as well as deriving solutions that are better adapted to the politics, culture and particular history of their situation (Ibid.).

In their work, Heifetz, Kania, and Kramer (2002), argue that the single greatest barrier to organisational effectiveness is the general trend of combating adaptive problems with technical tools – thus suggesting a reason why many multi-million dollar corporate efforts fail to inspire lasting and sustainable social change. Their conclusion is that adaptive problems can never be satisfactorily solved through tools that rely on a known quantity and the authority to impose a solution (Ibid.). Such issues require multiple stakeholders to be clear on their values, make choices from among difficult and painful options, and then to develop new solutions that are voluntarily initiated (Ibid.).

It is important to note that Adaptive Leadership does not require a leader to simply provide the answer. It rather requires the management of the correct conditions needed to enable individuals involved with complex challenges to work out and create solutions that ultimately necessitate changes in their own approach to business.

Such a leadership approach is not an abdication of responsibility. It is, instead, a requirement that leaders play a definitive and powerful role in engaging individuals to work productively on the issue in question. It is also unashamedly focused on getting results (Northouse, 2016).

2.6.3.3 How Adaptive Leadership achieves change

Adaptive Leadership seeks to promote positive change by encouraging debate, making individuals question their assumptions, and through applying social learning processes (Bryson et al., 2006). Adaptive leaders allow followers to work towards a common solution, rather than simply imposing a pre-prepared answer. The goal, therefore, is to create an environment that provides for a shift in mind-set while, at the same time, providing incentives for relevant parties to innovate and internalise solutions to the issue at hand. Heifetz, Kania, and Kramer (2002), identified a range of resources available to the Adaptive Leader to mobilise true adaptive work, including: directing attention, creating a holding environment, framing the key issues, and orchestrating multi-part conflict.

2.6.3.4 Other views on Adaptive Leadership

In 2003, Bass posited that today's organisations are facing a rate of change that has necessarily raised calls for a more adaptive and flexible form of leadership. Bass (2003) described Adaptive Leaders as being those who can operate more effectively in environments which rapidly change, helping to understand the challenges being faced by both leader and followers, and

then choosing an appropriate response to those challenges.

Bass's (2003) posit is based on the idea that Adaptive Leaders will work with followers to produce innovative solutions to complicated issues, while also helping them develop to handle an increased range of leadership responsibilities (Bennis, 2001). This form of Adaptive Leadership was initially described by Bass (1985) as 'transformational', prompting research to test transformational leadership theory, providing a level of general support for the hypothetical relationship between transformational leadership, transactional leadership, and overall performance.

Another contemporary view of Adaptive Leadership is provided by Owens and Valesky (2007) in 'Organisational Behaviour in Education: Adaptive Leadership and Reform'. The authors focus on the need for adaption in the face of today's fast-paced world which is perpetually changing. This adaption requires leaders, as well as educators, to remain continuously sensitive to changes in the external environment that require organisations to quickly respond. This sensitivity has been a key reason why contemporary leadership academics have challenged established leadership theory. There has been a recognition that change, complexity and lack of certainty are prevalent characteristics of today's working environment, so organisations must be ready and willing to adapt. This growing quantity of research has started to fulfil the need to identify innovative and effective means to lead through more unstable conditions that, in some cases, can reach near-chaotic levels.

Adaptive problems were defined by Owens and Valesky (2007) as those problems with such complexity and ill-understood factors that the outcome of whatever chosen course of action is unpredictable and abnormal. The leadership that is necessary to cope with changing issues requires the collaboration of many individuals over time, and needs to have more of an emphasis on a transformative nature and style (Ibid.). This collaborative leadership approach

produces a transformative relationship that serves to motivate followers through unifying the commitment to problem solving (Ibid.).

Owens and Valesky (2007) suggest that the solution to the challenges being faced by today's educational leaders is "Adaptive Leadership". They suggest a collaborative approach that focuses primarily on teamwork, advanced by them as today's 'contemporary scientific paradigm' is required. Adaptive Leadership, in their formulation, aims to transform interactions between leader and followers, energising individuals through a shared purpose and common values.

Such a leadership model serves to motivate all stakeholders to adopt fresh ways of learning, creating new ideas that are a key part of their organisational existence. For an organisation to make the transition from one of traditional transactional leadership to one of more transformative leadership necessitates the creation of new processes, requiring new roles and skills for a collaborative and cohesive team dynamic. This kind of team-building effort relies on fostering a greater level of trust between leader and follower, requiring that leaders continue to develop human capital across an organisation.

Kouzes and Posner (2002) have argued that, only individuals and organisations with the ability to adapt will succeed. In creating more and more adaptive systems, leaders will need to provide increasing discretion so that the needs of stakeholders (customers, clients, suppliers, etc.) continue to be met. As a consequence of this heightened discretion, there will be a raised ability to use and expand talents, training, and experience. The resulting payoff from enhanced adaptation will be bolstered performance.

James (2006) identified four key stages to adapting to rapid change, whereby it is partnered with complex technology and increasing data sources. These four stages are: technology, economics, demographics, and culture. In essence, James (2006) posits that individuals adapt

easily to new technology, accommodate new economic structures, and welcome new workers. However, it was suggested that individuals will tend to resist changing cultural beliefs, defined as beliefs in the “way things ought to be”; culture will always lag behind shifts in technology, the economy, and demographics (James, 2006).

As a result, Adaptive Leadership requires leaders in the midst of change to be able to “see it”, and pass this vision on to every other stakeholder. They need to have the capacity to tell a “new story” if they want staff or clients to fully accept their leadership. The last stage in the adaption process is cultural (or visceral) change, requiring that the “story” be compelling and believable, and linked to stakeholders’ deepest values and beliefs (James, 2006)

The model of Adaptive Leadership proposed by Mobbs (2004) aims to draw from nature to redefine the idea of leadership chaos as being the necessary spark for innovation and new ideas. This is founded on the premise that organisations exist in an increasingly dynamic, complex and socially aware environment (Ibid.). As such, organisations have a greater need to become more active and responsive to survive; this in-turn creates a need for a different style of leadership to create the means for innovation for business advantage (Ibid.)

Mobbs (2004) concludes that current theories of management have proved inadequate in addressing this particular challenge, because of its basis on the mechanistic world view that has dominated Western culture since the establishment of Newtonian physics. The inadequacies identified have helped establish an alternative view based on the “science of complexity”, which views all living things as complex adaptive systems (Ibid.). In such systems, independent participants are continuously reforming to shape their collective future (Ibid.).

Rather than see companies as ‘environments’, free of emotion with simple issues and answers, Mobbs’ (2004) paradigm considers them as places of uncertainty, with all of the inherent

capacity for innovation we associate with all forms of life. This has established new ways of thinking for business leaders; by viewing organisations as adaptive organisms that thrive through change, as opposed to machines that need adjustments, leaders can establish a creative and socially-aware culture that becomes the natural environment (Mobbs, 2004). Consequently, the key to understanding any organisation becomes its people, rather than its structures and processes (Ibid.). Adaptive Leaders, applying the principles discussed by Mobbs (2004) to their organisation, will benefit through its increased ability to thrive in a complex world, while also becoming situationally aware of its social responsibilities.

DeGenring (2005) argues that the question no longer focuses on “*how to manage change, but how to lead adaptive change*”. DeGenring (2005) states that organisations require the capacity to adapt their approaches, their economic models, their thinking, and their leadership in order to survive the environment they find themselves in. In effect, Adaptive Leadership more readily meets this aim than more traditional leadership approaches, which are increasingly insufficient in today’s business world (DeGenring, 2005).

Adaptive Leaders, in DeGenring’s (2005) formulation, will acknowledge the commensurate relationship between risk and adaptive change. This requires leaders to begin to model new behaviours, and understand that risk-taking and learning are fundamental leadership competencies. In addition, they need to foster these same adaptive capacities in their followers (Ibid.)

DeGenring (2005) suggests the following recommendations for the development of Adaptive Leaders:

- Repositioning the leader’s role as one who develops problem solvers.
- Asking the crucial questions without having all of the answers.

- Encouraging greater reflection and ‘big-picture thinking’, while taking the time to move processes forward.
- Demonstrating and modelling courage.

By instigating these recommendations and assimilating several leadership paradoxes, risk can be minimised and results improved throughout positive and sustainable change.

Nanstanski (2002) undertook an analysis and synthesis examination of the theoretical principles of chaos and complexity, using a panel constituted of industry experts. This approach was aimed at determining whether the postulated principles supported the establishment of a framework for a Dynamic Systems Model that could improve organisational management in rapidly shifting markets (Ibid.). Three of the principles presented – adaption, commitment-centric leadership, and modular products/processes – proved to hold the most value.

The results of Nanstanski’s research supported and underlined the principles of the chaos and complexity theories, presenting the idea that *“an adaption framework may be a more appropriate model for organisations operating in turbulent environments, and that adaptive culture, guided by visionary leadership, enabled by modular capabilities, offered the most value to the organisation studied”* (Nanstanski, 2002, pp.100).

Linsky (2006), also provided some insights into leadership adaptability, including the suggestion that *“if you could have only one skill in your toolkit, this is the one you need right now”* (Electronic Source: www.cambridge-leadership.com; www.cla.com, 2006). Linsky (2006) argues that CEOs need to be ready and able to adapt rapidly. Change should be considered the normal state of affairs, rather than the aberration, although profound change is the responsibility of the CEO themselves. Linsky (2006) takes the view that a CEO’s role in an organisation is to help it to develop adaptability, rather than stake out an immovable vision that

everyone must proceed towards. The challenge, however, is being able to identify what can and can't be altered at an organisation without negative consequences (Ibid.).

Linsky (2008) further states that a key difficulty in adaption is that it necessarily involves giving up values, beliefs, and business approaches that might have been crucial in earlier times. Despite this difficulty, however, leaders who are able to incorporate adaptability will create more adaptive organisations (Ibid.). These entail creating an atmosphere where employees are able and encouraged to share their views, and to raise difficult issues long before they become crises (Ibid.).

Glover, et al. (2002), in their article "Adaptive Leadership: When Change is Not Enough", present a framework for Adaptive Leadership inspired by Piaget's concepts of 'assimilation' and 'accommodation'. The aim is that Adaptive Leadership can be utilised to analyse the adaptive dynamics of leaders and their organisations, targeting organisational change through Adaptive Leadership (Ibid.). This analysis is based on the idea that the rapidly changing conditions mean that change initiatives *without* adaption will not be sufficient in order to survive.

Leaders will reach their full Adaptive Leadership potential when they are able to combine the highest assimilation and accommodation processes. They will utilise information sources to make informed decisions that allow their organisation to adapt and adjust to any particular challenge (Glover, et al., 2002).

Glover, et al. (2002), identified four critical necessities for increasing adaptive potential:

- Cultural competency
- Knowledge management

- Creating synergy from diversity
- Holistic vision

These principles are considered essential for Adaptive Leadership theory and the research demonstrates that they form an Adaptive Leadership theory that can provide a contextual model for today's leaders (Glover, et al., 2002). This conclusion is derived from comparison with traditional leadership theories developed mainly in the 1950s and 1960s (including trait theory, leadership style theory, situational leadership theory, and contingency theory), which offer only limited useful guidance to the world of today. Change was a slow process during these times and so managers did not have to worry about adaptation. Fast forward to today's working environments and it is clear that the ability of managers to adapt to their environment is essential.

Burns (1978) terms these older approaches as 'transactional leadership models'. They are notable for focusing only on the exchanges that take place between a leader and their followers. Burns distinguishes 'transformational leadership theory', created in the 1970s, from these models, though it still focuses on a leader in context with their followers. By contrast, the Adaptive Leadership theory that Glover et al. (2002) advance is targeted also at a leader's relationship with the wider environment.

The Adaptive Leadership theory presented by Glover et al. (2002) suggested that leaders undertake decision-making and leadership actions while being mindful of how their behaviours are broadly applicable to time and space, not simply as being relevant to just one organisational setting at a given moment in time.

With this understanding, they argue that leadership models rarely consider these synchronic and diachronic dynamics of human adaption, an evident shortcoming of these approaches

(Glover et al., 2002). The Adaptive Leadership theory they advocate does not prescribe particular actions or behaviours in particular situations (Ibid.). Instead, it creates the space for the development of innovative ideas, actions and behaviours that can apply to changing times; even allowing for solutions that have not even been conceptualised yet (Ibid.).

Glover et al (2002) developed a model based around four principles related to each other in a circular fashion; ‘cultural competency’, ‘knowledge acquisition’, ‘creating synergy from diversity’ and ‘holistic and sustainable vision’ (Figure 2.10). These four principles will deliver ‘assimilation and accommodation’.

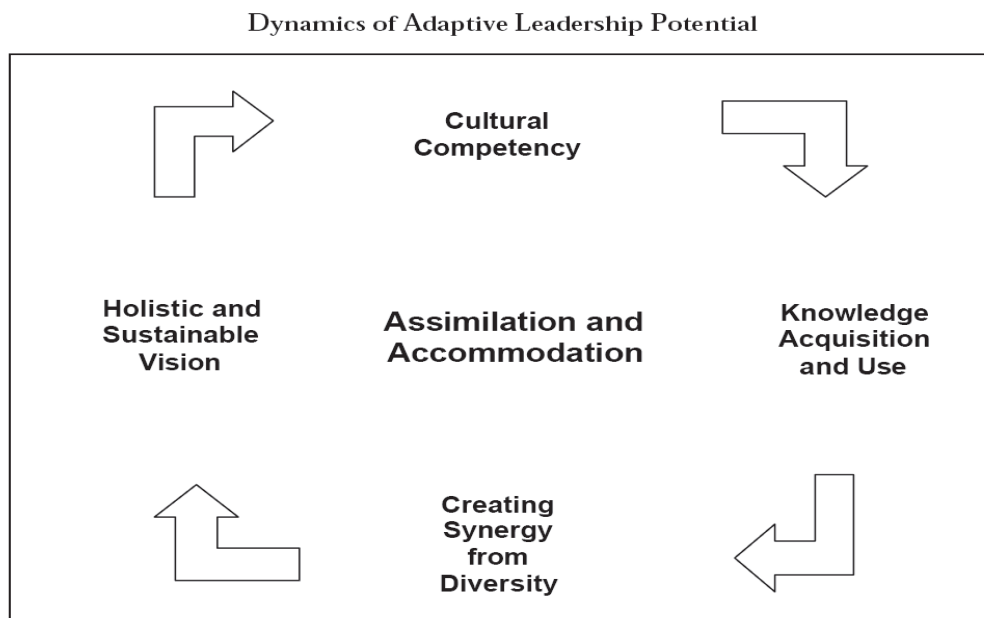


Figure 2.10 Dynamics of Adaptive Leadership Potential (Glover et al., 2002).

Principle one: An adaptive leader is culturally competent

A culturally interactions, analyse and gauge it and be able to act appropriately and make the necessary changes capable leader will have the appropriate cultural knowledge, will be able to effectively observe culture. According to Trompenaars and Hampden-Turner (1997) there are three main stages in becoming culturally competent. These are: having an awareness of cultural differences, having an appreciation and respect towards these cultural differences and being able

to reconcile personal culture with other cultures despite there being differences. They stated that “Once we are aware of our own mental models and cultural predispositions, understand that those of another culture are legitimately different, then it becomes possible to reconcile differences” (p. 200).

In order to become culturally competent you must first understand and accept that culture is a central component of the human condition. Adaptive leaders will have an appreciation and understanding of the subtleties of human culture. They will have an extensive knowledge of other cultures as they constantly work alongside people from a variety of different cultures.

While the leader may be culturally competent and have the necessary knowledge, it is important to point out that he/she will operate within a specific cultural context which will include many stakeholder groups. Each stakeholder group will have their own set of cultural norms and ideals. In order to be effective, the adaptive leader must have a high level of cultural competency but must also be proficient in the practicalities of the situation. Failure to fully understand the cultural environment they are operating in will make it difficult for them to operate effectively.

Principle two: An adaptive leader is able to effectively acquire and use knowledge

The second part of their theory – knowledge management – requires that Adaptive Leaders able to effectively seek out and apply fresh knowledge. This includes being aware of what their organisation knows, and what it still needs to learn. To do this, an Adaptive Leader needs to establish effective information systems and processes that can capture, store, and efficiently disseminate ‘explicit knowledge’ (data and its context) and ‘tacit knowledge’ (for example, personal contacts, experience, and judgment), which is associated with the historical experience of running an organisation.

An effective knowledge management system supports the identification, cataloguing and

storage of information, and makes these knowledge resources available to the organisation. An Adaptive Leader will not just process the information immediately in their perceptual field, but will utilise it to improve their ability to respond in different situations. This means that they can make alterations to the direction and operation of their organisation as they foresee, and identify changes in the wider environment. To do this, they need to be continuously checking and reassessing what they already know, and seeking to gather further information on what they don't (Glover et al., 2002).

Principle Three: An adaptive leader is able to create synergy from diversity

An Adaptive Leader must also be able to create synergy from diversity; to form a diverse group into a unit that produces more than the sum of its parts. This principle suggests that generating synergy must begin by thinking unconventionally and avoiding routine processes where a leader will actively defend the single best way they can conceive to view an issue. Taking an unmoveable stance may result in the leader becoming fixed around their position, and develop an unwillingness to listen to alternative approaches to a particular situation.

Principle Four: An adaptive leader Has holistic and sustainable vision

Adaptive leaders must have a holistic and sustainable vision, with a capacity for far-sightedness and the ability to think beyond the immediate. Such a vision should be utilised to create sustainable answers to problems and solutions that extend beyond the current requirements of the company or community (Glover et al., 2002). What distinguishes this form of leadership from older models, is that Adaptive Leaders are capable of devising well-planned solutions to environments that change quickly.

Glover et al. (2002) state that Adaptive Leaders need to undertake decision-making in a context that is larger than their present situation. As a result, an effective Adaptive Leader

will have the capacity to work in different environments, while retaining a view of how they fit in with the bigger picture. They will also have the foresight and awareness to contemplate the outcomes – both positive and negative – of the actions they take, and consider sustainability of the organisation.

The conclusion reached by Glover et al. (2002) is that Adaptive Leaders are set apart from their contemporaries. They are not simply ‘change makers’, but instead view the change process as a necessary and informative undertaking. They view every state of change as an opportunity for renewal that can lead them from their present state to the place they want to get to.

Adaptive Leaders will take external knowledge from their environment to assess and adjust their current course, and will take sound leadership decisions with due concern paid to stakeholder needs and the organisation at large. In effect, Adaptive Leaders will think globally and act locally, a central tenet of sustainability. The result is fresh organisational and management approaches that have the capacity to handle differences, and produce sustainable results.

The principles discussed above by Glover et al. (2002) demonstrated that in order to be effective in adapting your leadership style you must be culturally competent, have cultural knowledge and the ability to use the knowledge appropriately, and be able to create synergy from diversity. Two factors in particular are closely linked to the heart of the CQ concept namely cultural competency and knowledge acquisition and use, with the final outcome of both concepts being effective in leading diverse work environments. Therefore, CQ is a crucial component of being an adaptive leader.

A paper resulting from this thesis has been published which begins to understand the concept of leadership adaptability (Aldhaferi, 2017).

2.6.4 Leadership and Culture

Globalisation and the impact of globalisation on the business environment were introduced at the beginning of this chapter (section 2.2), and the concept of culture was also discussed. The effect of globalisation on leadership requires an understanding of how culture impacts leadership performance, and how a leader can become more cross culturally competent (Northouse, 2016). Adler & Bartholomew (1992) highlighted five aspects of cross cultural competencies that all leaders must strive to achieve:

1. To gain a better understanding of global business and political environments.
2. To gain a better understanding of the ‘perspectives, tastes, trends and technologies’, of other cultures.
3. To be able to work with individuals from other cultures at the same time as working within their own culture.
4. To be able to live and communicate within other cultures
5. To be able to relate and interact with other cultures from an equality perspective.

As with any cultural system, organisational culture helps to set the behaviour, values, assumptions, and beliefs of the members of that organisation. The role of the leader is vitally important in order to help create and sustain a positive organisational culture. The Global Leadership and Organisational Behaviour Effectiveness (GLOBE) study, carried out in the early 1990’s involving over 17,000 managers from 951 organisations in 62 societies, has been instrumental in understanding how cultural value dimensions are expressed in different cultures. The GLOBE project has been described by its authors as being a “*long-term program*

designed to conceptualise, operationalise, test and validate a cross-level integrated theory of the relationship between culture and societal, organisational, and leadership effectiveness” (House et al, 2004, p. 139). The study took Hofstede’s (1980) original research findings and extended them in order to explore differences between cultures. Leaders who have knowledge and awareness of cultural values are better placed to be able to effectively manage intercultural conflict and interactions (Moua, 2014).

2.6.4.1 Cultural Dimensions of Leadership and Culture

The main finding from the GLOBE study is that leadership effectiveness is heavily dependent on the context i.e. it is deeply rooted in the “*societal and organisational norms, values, and beliefs of the people being led*” (Hoppe, 2007, p. 1).

The GLOBE study aimed to measure leader effectiveness across cultures and developed nine cultural dimensions to facilitate the comparison of societies in terms of similarities and differences in norms, values, beliefs and practises (taken from Hoppe, 2007, p. 1). The following nine dimensions were considered to be the core dimensions of culture which exist in different societies. They are as follows: (taken from Hoppe, 2007)

1. Power Distance - The degree to which members of a collective accept power to be distributed equally.
2. Uncertainty Avoidance - The extent to which a society, organisation, or group relies on social norms, rules, and procedures to alleviate unpredictability of future events.
3. Humane Orientation - The degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others.

4. Collectivism I - (Institutional) The degree to which organisational and societal institutional practices encourages and reward collective distribution of resources and collective action.
5. Collectivism II - (In-Group) The degree to which individuals express pride, loyalty, and cohesiveness in their organisations or families.
6. Assertiveness - The degree to which individuals are assertive, confrontational, and aggressive in their relationships with others.
7. Gender Egalitarianism - The degree to which a collective minimizes gender inequality.
8. Future Orientation -The extent to which individuals engage in future-oriented behaviours such as delaying gratification, planning, and investing in the future.
9. Performance Orientation - The degree to which a collective encourages and rewards group members for performance improvement and excellence.

Researchers used the nine dimensions in order to evaluate the similarities and differences between cultural groups. The results were clustered into groups, with each country in a particular group being culturally similar to other countries in the same group. Cultural similarities included characteristics specific to their region, language, religion, history, and shared cultural understanding (Hoppe, 2007) (see Figure 2.11). Clusters with similar characteristics were placed close to each other, whilst clusters that are opposite to each other are viewed as being culturally different.

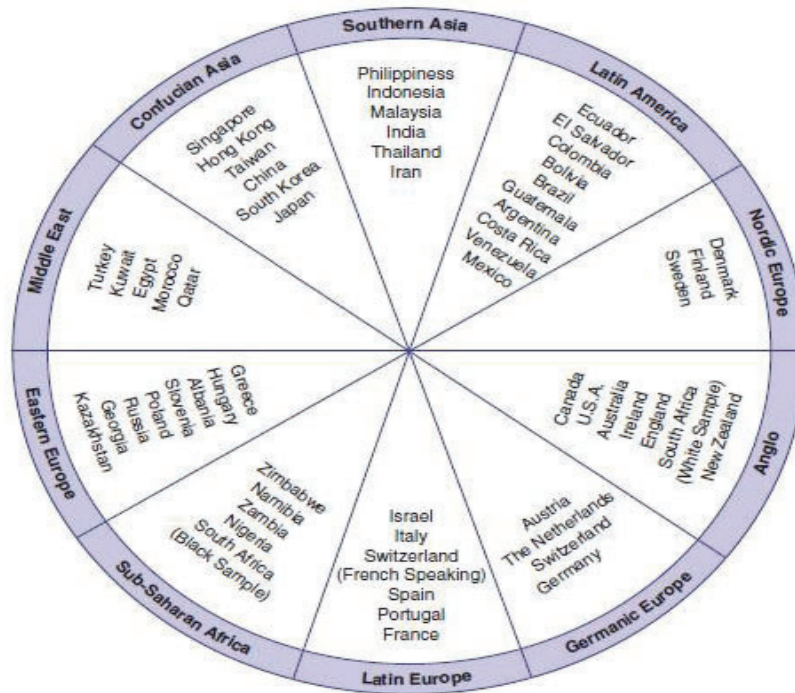


Figure 2.11 *Country Clusters According to GLOBE* (Adapted from House et al., 2004.)

For example, in the above diagram, the Nordic cluster is most different from the Eastern Europe cluster and most similar to the Anglo and Latin America Cluster.

CULTURAL DIMENSION	HIGH-SCORE CLUSTERS	LOW-SCORE CLUSTERS
Assertiveness Orientation	Eastern Europe Germanic Europe	Nordic Europe
Future Orientation	Germanic Europe Nordic Europe	Eastern Europe Latin America Middle East
Gender Egalitarianism	Eastern Europe Nordic Europe	Middle East
Humane Orientation	Southern Asia Sub-Saharan Africa	Germanic Europe Latin Europe
In-Group Collectivism	Confucian Asia Eastern Europe Latin America Middle East Southern Asia	Anglo Germanic Europe Nordic Europe
Institutional Collectivism	Nordic Europe Confucian Asia	Germanic Europe Latin America Latin Europe
Performance Orientation	Anglo Confucian Asia Germanic Europe	Eastern Europe Latin America
Power Distance	No clusters	Nordic Europe
Uncertainty Avoidance	Germanic Europe Nordic Europe	Eastern Europe Latin America Middle East

Figure 2.12 *Nine Cultural Dimensions and Cluster Scoring* adapted from House et al., 2004.

Figure 2.12 shows the nine cultural dimensions in the left hand column, with an example of both high scoring and low scoring cultures for the particular cultural dimension in the middle and right hand columns. For example, the first cultural dimension is ‘assertiveness orientation’, with eastern European and Germanic Europe cultures scoring high against this dimension, and Nordic Europe culture scoring low.

An important finding from the GLOBE study was the perception of effective and ineffective leadership within different cultures. Six global leadership behaviours were identified and applied to each cluster in order to identify how each cluster perceived leadership, and to identify the preferred leadership style of each cluster. The six leadership styles are: (taken from Hoppe, 2007, p. 3).

1. Charismatic/value-based- stresses high standards, decisiveness, and innovation; seeks to inspire people around a vision; creates a passion among them to perform; and does so by firmly holding on to core values.
2. Team-oriented - instils pride, loyalty, and collaboration among organisational members; and highly values team cohesiveness and a common purpose or goals.
3. Participative - encourages input from others in decision-making and implementation; and emphasises delegation and equality.
4. Humane-oriented - stresses compassion and generosity; and it is patient, supportive, and concerned with the well-being of others.
5. Autonomous - characterised by an independent, individualistic, and self-centric approach to leadership.
6. Self-protective - emphasises procedural, status-conscious, and face-saving behaviours; and focuses on the safety and security of the individual and the group.

Table 2.8 Societal Clusters and Leader Styles Adapted from House et al, 2004

Performance Oriented Higher	Team Oriented Higher	Participative Higher	Humane Higher	Autonomous Higher	Self or Group-Protective Higher
Anglo Germanic Nordic SE Asian L. European L. American	SE Asian Confucian L. American E. European African L. European	Germanic Anglo Nordic	SE Asian Anglo African Confucian	Germanic E. European Confucian Nordic SE Asian Anglo	Middle Eastern Confucian SE Asian L. American E. European
Confucian African E. European	Nordic Anglo Middle Eastern Germanic	L. European L. American African	Germanic Middle Eastern L. American E. European	African Middle Eastern L. European L. American	African L. European
Middle Eastern		E. European SE Asian Confucian Middle Eastern	L. European Nordic		Anglo Germanic Nordic
Lower Performance Oriented	Lower Team Oriented	Lower Participative	Lower Humane	Lower Autonomous	Lower Self or Group-Protective

The Table 2.8 above indicates the most preferred leadership style by cluster group. For example, Anglo, Germanic and Nordic cluster are more performance orientated while are lower in self or group protective, while the Middle Eastern cluster is higher in self or group protective but lower in performance orientation.

Another outcome of the GLOBE study was also identified desirable and undesirable leadership characteristics (House et al, 2004). A total of 65 characteristics, as shown in Table 2.9, were identified; 22 of them were considered to be “universally desirable characteristics” regardless of the culture and eight were considered to be “universally undesirable” (House, et al, 2004 and Clark et al., 2016). The remaining 35 characteristics were described as being “culturally contingent” (House et al, 2004).

Table 2.9 Adapted from House et al, 2004

Universally Desirable Leader Characteristics	
Trustworthy	Decisive
Just	Excellence-oriented
Honest	Dependable
Foresight	Intelligent
Plans ahead	Effective bargainer
Encouraging	Win-win problem solver
Positive	Administratively skilled
Dynamic	Communicative
Motive arouser	Informed
Confidence builder	Coordinator
Motivational	Team builder
Universally Undesirable Leader Characteristics	
Loner	Irritable
Asocial	Egocentric
Indirect/Non-explicit	Ruthless
Non-cooperative	Dictatorial
Culturally Contingent Leader Characteristics	
Anticipatory	Intuitive
Ambitious	Logical
Autonomous	Micro-manager
Cautious	Orderly
Class conscious	Procedural
Compassionate	Provocateur
Cunning	Risk taker
Domineering	Ruler
Elitist	Self-effacing
Enthusiastic	Self-sacrificial
Evasive	Sensitive
Formal	Sincere
Habitual	Status-conscious
Independent	Subdued
Indirect	Unique
Individualistic	Wilful
Intra-group competitor	Worldly
Intra-group conflict avoider	

Leaders have the power to influence the culture of the organisation by employing methods which address the assumptions, beliefs and values of their followers (Hoppe, 2007). However, this is not a simple task, as culture often manifests itself in many different ways, as demonstrated by the development of nine dimensions. Sub-conscious behaviours, values, and

assumptions can develop over time and are also subject to change as new employees enter an organisation and alter the predominant culture. The GLOBE study gives some valuable insights into the role of culture and leadership; leaders who understand their own culture and the cultures of their followers are better placed to positively influence cultural interactions within the workplace (Hoppe, 2007). The scope and size of the GLOBE study add validity to the findings presented by the authors. However, some critics of the GLOBE study suggest that while it has provided many insights into leadership in different cultural settings, it does not “*provide a clear set of assumptions and propositions that can form a single theory about the way culture relates to leadership or influences the leadership process*” (Northouse, 2016, p.450). There is also criticism of how the authors categorized and defined the cultural dimensions and leadership behaviours, and in the actual measurement of leadership behaviour (Northouse 2016).

None the less, the implications of the GLOBE study are important for this thesis. In the GLOBE study, the ‘Middle East’ profile indicated that leaders scored high on ‘in group collectivism’ and low on ‘future orientation, gender egalitarianism and uncertainty avoidance’ (Northouse, 2016). This indicates that while the Middle East countries take great pride and loyalty with their families and organisations, it is common for gender differences to play a role. Concepts such as orderliness, consistency, policies and procedures are also not as significant in the Middle East as they would be elsewhere (Northouse, 2016). In terms of the leadership profile for the Middle East, Northouse (2016) argues that the Middle East profile differs from all the other country clusters in that they emphasised characteristics such as ‘status and face saving’ more so than ‘charismatic, or team orientated leadership’. Given that the UAE is made of more than 200 nationalities; it is possible that there will be different approaches in the leadership style of many of the school leaders.

2.6.5 Leadership and Cultural Intelligence

In the previous sections on leadership theory (see section 2.6.2), intelligence and culture has been repeatedly linked to leadership and in particular has been described as one of the more important leadership traits contributing to increased “*complex problem-solving skills and social judgment skills*” (Northouse, 2016, p. 48). Northouse (2016) describes how intelligence is positively linked to leadership, and how evidence was found to support the statement that leaders tend to have higher intelligence than non-leaders. When the situational aspect of leadership is considered, it can be appreciated that cultural intelligence is relevant to leaders who find themselves in culturally challenging situations. It can be argued that cultural intelligence and intelligence more generally have a role to play in the leadership process in culturally diverse situations (Northouse, 2016).

Multi-cultural organisations require leaders to examine their own personal values and beliefs derived from their personal culture, customs, and norms within the context of the cultures which are exhibited by their followers (Forsyth, 2015). A number of researchers undertaking investigations in the area of cultural intelligence have brought to the fore the issue of leadership and the influence of cultural intelligence on successful leadership processes within organisations. For example, Livermore (2010) and Mannor, (2008) both argued that CQ increases leaders’ abilities to assess culturally diverse work settings, thereby enabling them to adapt their leadership style accordingly. Livermore (2010) goes further to state that leaders with advanced capabilities in CQ “*greatly contribute to leadership effectiveness and performance outcomes’ in culturally diverse teams*” (p. 41).

There are very few studies that have investigated both the qualitative and quantitative aspects of CQ and Leadership style; a study carried out by Groves and Feyerherm (2011) concluded that CQ was positively related to leadership performance in situations of high staff diversity,

while CQ was unrelated to leadership performance when the situation was less diverse. A study by Rockstuhl (2011) demonstrated that CQ predicted cross border leadership effectiveness, as opposed to simply general leadership effectiveness.

A study by Dean (2007) in (Ang et al 2009) found that global leaders utilise metacognitive CQ in all their leadership processes. A further study carried out by Deng & Gibson (2008) in (Ang et al 2009) also demonstrated that motivational CQ is an essential component for cross cultural leadership effectiveness (Ang et al, 2009).

Thomas (2006) who defines Cultural Intelligence, as *“the ability to interact effectively with people who are culturally different”* and *“to generate appropriate behaviour in new cultural settings”* states that *“CQ will interact with leadership, allowing the leader to understand the differences between the host culture values and his or her own beliefs thereby strengthening positive relationship between leadership and cultural adaptation”* (p. 81). Furthermore, Vogelgesang et al. (2009) argues that cultural intelligence coupled with leadership creates an interaction, whereby increasing levels of cultural intelligence will strengthen the relationship between leadership and cultural adaptation. This is a key interaction will be tested in this research.

2.6.6 Educational Leadership and Cultural Intelligence

The challenges faced by 21st century educational leaders have changed over time. An increased diversity in the student population within educational institutions requires that leaders need to be cultural intelligence in order to lead successfully (Thomas, 2006).

There are limited studies addressing the nature of the relationship between CQ and educational leadership. However, there are studies investigating the relationship between general leadership in educational settings. (Day & Leithwood, 2007; Walker & Cheong, 2009;

Leithwood & Jantzi, 2005; Leithwood et al., 1996). Then again, there is also a paucity of studies regarding leadership in international school settings (Bunnell, 2008; Collard, 2007; Walker & Cheong, 2009). The lack of studies in these areas has implications for this study; many schools in Abu Dhabi, particularly in the private sector are classed as “international schools” due to the international curriculum on offer, and the international student body.

In a qualitative study of international school leaders in Hong Kong by Walker & Cheong, (2009) key challenges identified included leading effectively to enable student learning, and leading intercultural teams. Murakami-Ramalho & Benham (2010) discussed the “*many layers of complexity which exists in international school settings*” (Murakami-Ramalho & Benham, 2010; p. 627) and highlight the level of collaborative leadership that is required in order to create the desired teaching and learning environment. Furthermore, although not empirically based work, Walker and Riordan (2010) discussed the importance of the leader in fostering an environment of cultural understanding and knowledge among staff. Walker & Shuangye (2007), in their article on international school leadership, highlighted that schools which are culturally diverse must have leaders who are “authentic and value ongoing leadership learning”. They also stress the importance of cultural understanding being an integral part of the leader’s personal development (Ibid.).

There is also evidence of the impact of leadership style on educational leadership in a UAE setting. Litz (2014) investigated the extent to which school principals in the UAE practice transformational leadership in order to foster change and innovation. In the study by Litz (2014), 130 Emirati school principals and teachers took part in a survey, based on the transformational leadership model, while four school principals also took part in semi-structured interviews. Results of this study indicated that school principals believed that they were practicing high levels of transformational leadership, but the majority of the teachers were

in disagreement with their self-assessments (Ibid.). The differences in opinions between the school leaders and teachers were explained by the cultural differences between the mostly Islamic population and the fact that the Emirati principals in question had adopted a more Western approach to the transformational leadership paradigm (Ibid.). Positive outcomes from this research indicated that transformational leadership is being implemented in the UAE, albeit with elements of transactional leadership (Ibid.). Recommendations from this study included the adoption of a more 'Modified Transformational Model', which is better suited to the UAE context, and also that school leaders be encouraged to use transformational leadership through a series of training and development programs (Ibid.). Litz (2014) also called for more studies investigating the use of transformational leadership in cross cultural situations within a UAE context. The study by Litz (2014) provides particularly relevant evidence and findings for this thesis, especially given the lack of UAE specific studies found.

A study carried out by Ibrahim & Al Taneiji (2012) investigated the relationship between a principal's leadership style and the performance level of the school. This study utilised the Multifactor Leadership Questionnaire (MLQ) in a questionnaire that was given to teachers in 34 public schools in Dubai. Results concurred with the findings presented by Litz (2014) in that transformational leadership was the most predominant leadership style, but that transactional and laissez-faire styles also existed. The authors emphasised the need for further research on school principalship, school performance, and effectiveness in the UAE (Ibrahim & Al Taneiji, 2012).

A study carried out by Mahdi et al (2012) investigated the relationship between CQ and the leadership styles of primary school managers in Iran. The study concluded that there was a positive relationship between high CQ and transformational leadership style. The authors went on to argue that in educational institutions, with large and ethnically diverse teaching staff,

administrative staff, and student population, it is essential that a leader has an effective leadership style and that this leadership style can be greatly supported and enhanced by increased by CQ.

In a study by Keung and Rockinson-Szarkiw (2013) which investigated international school leaders, it was found that there is a “*significant positive relationship between cultural intelligence and transformational leadership*” (Keung and Rockinson-Szarkiw, 2013; p. 836). It was also documented in this study that “*leaders who have high levels of cultural intelligence also exhibit high levels of transformational leadership style*” (Keung and Rockinson-Szarkiw, 2013; p. 841). Their findings suggest that leaders with high-cultural intelligence are more effective at managing in multicultural environments (Ibid.). In particular, they also suggested that behavioural and cognitive cultural intelligence were found to be the best predictors of transformational leadership.

Leithwood & Jantzi (2005) also linked transformational leadership to a number of individual and organisational outcomes in school settings. They found empirical evidence to support the positive impact of transformational leadership on individual outcomes, such as direct and indirect effects on increasing teacher’s commitment, and teacher’s job satisfaction; as well as organisational outcomes such as school culture, organisational planning and learning, and strategies for change (Leithwood & Jantzi, 2005). These findings were also supported by other authors, such as Bogler (2001) Keung, (2013), Ross & Gray (2006) Silins & Mulford (2002).

A small number of studies investigated the context of schools, particularly within multicultural settings. In a study by Mancuso et al. (2010), which included 22 school headteachers and 248 teachers in East /South Asian international schools, the most important variable within the study was the “*perception of the leadership style of the head of school*”, and transformational leadership was found to be a predictor of improving teacher retention in international schools.

This is important, as Odland & Ruzicka (2009) argued that the reduction of teacher turnover is imperative for improving continuity which is considered a key factor for improving student learning.

Therefore, when developing education leaders in the UAE, cultural nuances must be considered. This is especially important when thinking about the labour force in the UAE, which brings together over 200 nationalities at the workplace and to society as a whole.

2.7 Conclusion

A comprehensive historical review on leadership theories and their core contributions has been presented. The review covered the early traits, skills, and styles approaches, and then built towards adaptability leadership theory, with focus on the full range leadership model, which forms the basis for this research (as it is one of the few models which covers more than one leadership style), and the latest studies using these theoretical ideas have been contextualised to an educational setting.

These theories are considered to be the predecessors of adaptability theory, assuming that leaders are able to change or adapt their style of leadership, dependent upon the situation. Further discussion on adaptability as an element of culture within leadership, highlighted the need for a “widely available, psychometrically sound, multidimensional scale of adaptive leadership performance”, and hence this thesis is a response to this call.

By looking at the notion of adaptability, the issue of a link with cultural competence was highlighted and emphasised by many authors. In this research, the construct of Cultural Intelligence will be utilised to test the nature of the relationship between cultural intelligence and leadership styles.

In particular, the notion of adaptability of leadership style in response to cultural intelligence will be examined. Therefore, the aim of this research is to understand the relationship between the levels of CQ and the ability to adapt leadership style amongst the leaders in the Abu Dhabi Education Sector. The dynamic nature of leadership “adaptability” will be tested to see if there is a relationship between CQ, leadership style and leadership adaptability.

2.8 Knowledge Gaps, Research Rationale, Questions and Hypothesis

Development

2.8.1 UAE Context

This chapter highlighted that, all around the world, developing and developed nations recognize that education is the key to a country’s success and ability to compete on a global scale. The United Arab Emirates (UAE) is no exception, and has long viewed an educated population as the key to competing in a diverse and global economy (Alhebsi, Pettaway and Waller, 2015).

This focus on education has contributed greatly in moving the UAE from a tribal society to a modern society, while securing its place as one of the most flourishing countries in the region (Alhebsi, Pettaway & Waller, 2015). Given the government’s focus and belief in education as a key driving force, the country continuously reforms and develops its education system with a goal of enhancing its ability to compete in the rapidly changing global economy.

Like any institution, the education sector cannot be successful without a leadership team capable of leading it to its success. However, the impact of educational leadership has more at stake than other institutions – it impacts the development of the country, its people and its position on the global scale.

The topic of educational leadership and its impact on a country's ability to compete globally has increased in importance in different parts of the world (Iskander, Pettaway, Waller & Waller, 2016). Bottery (2004) has even called the development of educational leaders a matter of extreme national concern. Countries such as Canada, the United Kingdom, Sweden, USA, Singapore, Hong Kong and Australia seem to agree with Bottery's assertion. These nations have focused their attention and resources on the development of effective educational leadership (Moorosi & Bush, 2011). These countries have made developing their educational leaders' capacity and competency a priority, using measures such as performance benchmarking and adopting universal performance standards in an attempt to reform.

There's no doubt that the ability to lead in a global economy is a skill that educational leaders must master. Given these realities, educational leaders in the UAE face great challenges ahead. In addition to aligning UAE education standards with global standards, teachers also have the challenge of preparing students to succeed in a global world – one which includes different cultures, languages, practices and ever-changing skills (Benjamin, 1999).

Doing so is often referred to as providing students with a “Global Education”, which is defined as an “...active learning process based on the universal values of tolerance, solidarity, equality, justice, inclusion, co-operation and nonviolence (Zajda, 2018; pp. 43). Global education understands that students will not be successful unless they are exposed to diverse ways of thinking, develop a global mindset and understand the interrelatedness of social, political and economics around the world (Lumadue & Waller, 2013c).

More people are moving across borders than ever before through migration, global assignments and working holidays. This is especially prevalent in the UAE, a country that brings together over 200 nationalities, some who stay for the short-term, medium-term and some who stay for

most of their lives. The UAE's Ministry of Education recognizes that as things change rapidly in a global economy, this brings with it uncertainty. Therefore, the ability to develop the skills needed to navigate a complex, constantly evolving and uncertain world is becoming more and more paramount (Al-Suwaidi, 2011). As a result of this, cross-cultural interactions play a huge role in the education system in the UAE. A global education will also prepare students in the UAE to be successful in an "...ever evolving, multicultural and diverse workplace", no matter where they end up in the world (Shaw, 1997).

2.8.2 Research Gaps addressed by this Research

Based on the review and discussion of literature in this chapter so far, a number of gaps have been identified in the leadership, CQ, and leadership adaptability literature.

2.8.2.1 Gap 1: Empirical evidence of the level of CQ of school leaders in the Emirate of Abu Dhabi does not exist

No studies exist which examine the level of cultural intelligence of school leaders in the Emirate of Abu Dhabi. There are studies investigating the relationship between general leadership issues in educational settings (for example, Day & Leithwood, 2007; Walker & Cheong, 2009; Leithwood & Jantzi, 2005; Leithwood et al., 1996). However, none address the level of CQ in an educational setting, or in UAE.

This is partly due to the fact that Cultural Intelligence is a relatively new concept with a measurement scale which has only existed for 10 years. Subsequently, sufficient time has not passed for thorough testing in a wide variety of contextual environments. This gap in the body of knowledge is confirmed by a meta-review of CQ studies carried out by Ott and Michailova (2018), in which CQ in educational settings and in UAE geographical context is not described.

This research will answer the call by Ang et al (2010), for further testing and validation of the CQ scale in both a new location and a new sector. In the UAE, there has not been research carried out which measures the levels of CQ leaders in a particular sector. This research will enable a CQ baseline to be developed for educational leaders in the UAE which can be used for all future research, and which can be useful in terms of training and development of future leaders. Given the importance of the education system for the UAE government as it hopes to move to a more service orientated economy, it is intended that this research will add fresh new perspectives, both in terms of educational leadership and CQ research.

2.8.2.2 Gap 2: Empirical evidence of the dominant leadership style among school leaders is limited

There has been just two studies which have identified the leadership styles in the UAE's education sector. Litz (2014) investigated the extent to which school principals in the UAE practice transformational leadership in order to foster change and innovation. The study by Litz (2014), included 130 Emirati school principals and teachers, with four school principals taking part in semi-structured interviews. Results indicated that school principals believed they were practicing high levels of transformational leadership, but their subordinates (teachers) were in disagreement with their self-assessments (Ibid.). Recommendations from this study included requiring school leaders to learn transformational leadership through a series of training and development programs (Ibid.). Litz (2014) also called for more studies investigating the use of transformational leadership in cross cultural situations within a UAE context.

A further study carried out by Ibrahim & Al Taneiji (2012), investigated leadership styles in an educational setting, studying the relationship between a school principal's leadership style, and the performance level of the school. The study used the Multifactor Leadership

Questionnaire (MLQ) in a research instrument that was given to teachers in 34 public schools in Dubai. Results concurred with the findings presented by Litz (2014), concluding that transformational leadership was the predominant leadership style, but that transactional and laissez-faire leadership styles also existed. The authors emphasised the need for further research on school principals, school performance, and effectiveness in the UAE (Ibrahim & Al Taneiji, 2012).

Therefore, there has been relatively limited research and studies identifying the leadership styles being applied in the UAE's education sector. As a consequence, the objective of this research is to measure the predominant leadership style being utilised by Abu Dhabi school leaders, covering all three leadership styles and using the MLQ5X scale. This will produce further insights into the UAE education sector. It will also contribute towards a necessary baseline for predominant leadership styles, which will prove valuable for the training and development of the UAE's future leaders. Moreover, it should contribute towards rectifying the lack of studies measuring leadership styles in an education setting.

2.8.2.3 Gap 3: Empirical evidence of the level of leadership adaptability of school leaders in the Emirate of Abu Dhabi does not exist

No studies exist which examine the level of leadership adaptability of school leaders in the Emirate of Abu Dhabi. Further to this, a quantitative research instrument which can be used to measure leadership adaptability also does not exist, and therefore there is no research concerning the level of leadership adaptability outside of the UAE or in non-educational settings which can be referenced and serve as a guide in this study.

This study will use focus group sessions with school leaders to understand the issue of leadership adaptability in the UAE, and from these sessions develop a quantitative research

instrument. This research instrument will then be used alongside the CQ and MLQ5X scales in the quantitative study.

2.8.2.4 Gap 4: Empirical evidence explaining the relationship between a leader's cultural intelligence and leadership style is limited

Building on the lack of studies identifying cultural intelligence or leadership styles in the UAE education sector, there are limited studies or research on the *relationship* between cultural intelligence and leadership styles in the UAE education sector.

Previous studies have identified the notion of leaders being able to function across various cultures (for example, Deng & Gibson, 2008; Alon & Higgins, 2005; Rockstuhl et al., 2011; Ismail et al., 2012). But just a handful of articles have explicitly brought together the CQ research instrument and the MLQ5X leadership style research instrument, and have served only to identify the relationship between CQ and transformational leadership (Elenkov & Manev, 2009; Ismail, Reza & Mahdi, 2012; Keung & Rockinson-Szapkiw, 2013; Lee, Veasna & Wu, 2013, Eken et al., 2014). However, none of these were carried out in an educational setting, or in the UAE.

Overall, it is evident that there is more research required regarding the gap in the literature relating to CQ and leadership styles, and in particular the relationship between CQ and the *full range* leadership style. Further, there are no studies investigating this relationship in an education setting, nor in the UAE educational sector.

2.8.2.5 Gap 5: Empirical evidence explaining the relationship between a leader's CQ and their ability to adapt their leadership style does not exist

No empirical evidence has brought together the concepts of cultural intelligence and leadership adaptability. Studies of CQ have been identified (see Gap 1), but no studies have sought to

bring together the level of a leader's cultural intelligence and their ability to adapt their leadership style.

It is considered vital that the relationship between leader CQ, leadership styles, and leadership ability is fully understood in order to inform the UAE education sector as it delivers the move to a more service focused economy.

2.8.3 Research Questions and Hypothesis Development

The previous section outlined the context for this study, and identified several gaps in the existing body of knowledge regarding school leaders in Abu Dhabi, cultural intelligence, leadership style and leadership adaptability. This section identifies a number of research objectives, questions, and hypotheses.

Objective 1: To estimate the level of Cultural Intelligence components of school leaders in the Abu Education Sector.

For this objective the following question and hypothesis will be tested:

Research Question 1: What are the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi?

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are not significantly different from the normative CQ level.

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are significantly different from the normative CQ level.

As there is no previous research which identifies the level of CQ of school leaders in the UAE, the null hypothesis is that their level of CQ is not significantly different from the normative CQ level. The alternative hypothesis is that school leaders will have levels of CQ which are significantly different from the normative CQ level.

An assumption, that the UAE education sector provides a multi-cultural context which will enhance cultural intelligence, could be assumed but is not supported with evidence.

Objective 2: To identify the predominant leadership style of school leaders in the Emirate of Abu Dhabi.

For this objective the following questions and hypothesis will be tested:

Research Question 2: What is the predominate leadership style profile of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level.

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level.

There is no previous research which has identified the full range of leadership styles of school leaders in the UAE, and therefore the null hypothesis is that they exhibit each of the three styles in line with the normative MLQ level. Previous studies have sought to understand a particular type of leadership style (transformational) in similar geographical locations (Dubai & Iran), but there is no previous research which identifies the full leadership style profile of school leaders in the UAE.

The resulting alternative hypothesis, based on an assumption that school leaders will exhibit each of the three types of leadership significantly different from the normative MLQ level, resulting in one leadership style being more predominant than the others.

Objective 3: - To estimate the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi

For this objective the following questions and hypothesis will be tested:

Research Question 3: What is the level of Leadership Adaptability (LA) of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of Leadership Adaptability for school leaders in the Emirate of Abu Dhabi is not significantly different from the Leadership Adaptability scale midpoint of 4.0 (moderate Leadership Adaptability).

H₁: The average level of Leadership Adaptability for school leaders in the Emirate of Abu Dhabi is significantly different from the Leadership Adaptability scale midpoint of 4.0 (moderate Leadership Adaptability).

The leadership adaptability of school leaders in the Emirate of Abu Dhabi is unknown. Previous research has yet to establish this. The null hypothesis is therefore that the average level of leadership adaptability is not significantly different from the Leadership Adaptability for midpoint of the scale, with a small number having very high or very low levels of each type of style. The alternative hypothesis is that their average level of leadership adaptability will be significantly different from the midpoint of the scale. It may be that their levels of leadership adaptability are skewed towards the ‘high’ end of the scale, as leaders are aware of the culturally diverse environment and therefore adapt accordingly, but there is no evidence to support this assumption.

Objective 4: To Establish the degree to which Cultural Intelligence, Leadership style and Leadership Adaptability are related.

For this objective the following questions and hypothesis will be tested:

Research Question 4a: Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style?

H₀: There is no relationship between Leadership Style and Cultural Intelligence

H₁: There is a significant relationship between Leadership Style and Cultural Intelligence.

Research Question 4b: Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence?

H₀: There is no relationship between Cultural Intelligence and Leadership Adaptability.

H₁: There is a significant relationship between Cultural Intelligence and Leadership Adaptability.

In both cases, a null hypothesis has been developed which states there is no relationship between the concepts of leadership style and cultural intelligence, and cultural intelligence and leadership adaptability. In both cases, these relationships have not been tested before with UAE school leaders, and therefore there is nothing to suggest that the concepts will be related. Alternative hypotheses for both research questions suggest that there is a relationship between the concepts.

2.9 Conclusion

This literature review chapter has centred on globalisation and its effects on all organisations and in particular the education sector, and how these fast and ever-changing factors have resulted in the need for educational leaders who can function effectively in diverse environments, and adapt their leadership style to their diverse work environments.

A review of the relevant literature has demonstrated that the concept of Cultural Intelligence (CQ) can have a positive effect on leadership outcomes, and that CQ is a desirable leadership competency. The ability of a leader to adapt to their surroundings has also been highlighted as being a desirable leadership attribute. Overall, it was found that there was a lack of evidence linking the three concepts of CQ, leadership style, and leadership adaptability. The non-existence of a leadership adaptability scale prompted the need to develop one. The Arab world, which consists of 21 countries and 420 million population makes it a suitable context to conduct this research as limited research has been carried out previously. The UAE is one of the prominent countries in the Arab world. In addition, it is also a highly diverse country (with an equally diverse education sector) and provides a suitable context within which to study the three concepts of CQ, leadership style, and leadership adaptability.

Therefore, this research will address these gaps in knowledge, through investigation of the relationship between the levels of cultural intelligence, leadership style, and the ability to adapt leadership amongst school leaders in the Abu Dhabi education Sector. The following chapter describes the research methodology adopted in order to address the research questions and hypotheses posed in this chapter.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology employed in this research. The objective of this chapter is to describe the steps taken and the methods used to collect data for the study, along with an overview of the theoretical underpinning at each step. It is divided into three main parts: Section 3.2 describes the research design using a systematic approach, section 3.3 discusses the validity and reliability for this research and section 3.4 draws a conclusion of the chapter.

Research in the area of business can be categorised into ‘applied’ and ‘fundamental’ research. Applied research is aimed at solving a specific problem currently being experienced by company, whereas fundamental research has a more general objective of generating knowledge and understanding of a phenomena and / or problems that commonly occur in various organisational settings, which consequently add or contribute to the general body of knowledge in a particular area of interest to the researcher (Sekaran, & Bougie, 2016).

The research presented in this thesis is fundamental research, since it investigates, in a general sense, the relationship between the levels of cultural intelligence (CQ) and the ability to adapt leadership style amongst the leaders in the Abu Dhabi education Sector, and therefore seeks to add to a more theoretical and general body of knowledge.

3.2 Research Design

The research design is the central outline of how a piece of research will be undertaken. Feinberg et al. (2012) state that a “*research design is the basic plan that guides the data collection and analysis phases of the research study. It is the framework that specifies the type of information to be collected, the sources of data, and the data collection procedure*” (Feinberg et al. 2012; p. 54). A good design will ensure that the information gathered is consistent with the study objectives and that data are collected by accurate and economical procedures.

There is no standard, or idealised research design to guide the researcher, since many different designs may accomplish the same objective. Easterby-Smith, Thorpe, and Lowe (2002), assert that research design is “*the overall configuration of a piece of research: what kind of evidence is gathered from where, and how such evidence is interpreted in order to provide good answers to the basic research question*” (Easterby-Smith, Thorpe, and Lowe, 2002; p. 21).

The systematic structure of research design suggested by Sekaran (2005), provides a logical approach that helps the researcher to meet the purpose of their research. Figure 3.1 shows an adapted version of Sekaran’s model, to show the step by step process and design employed for this research.

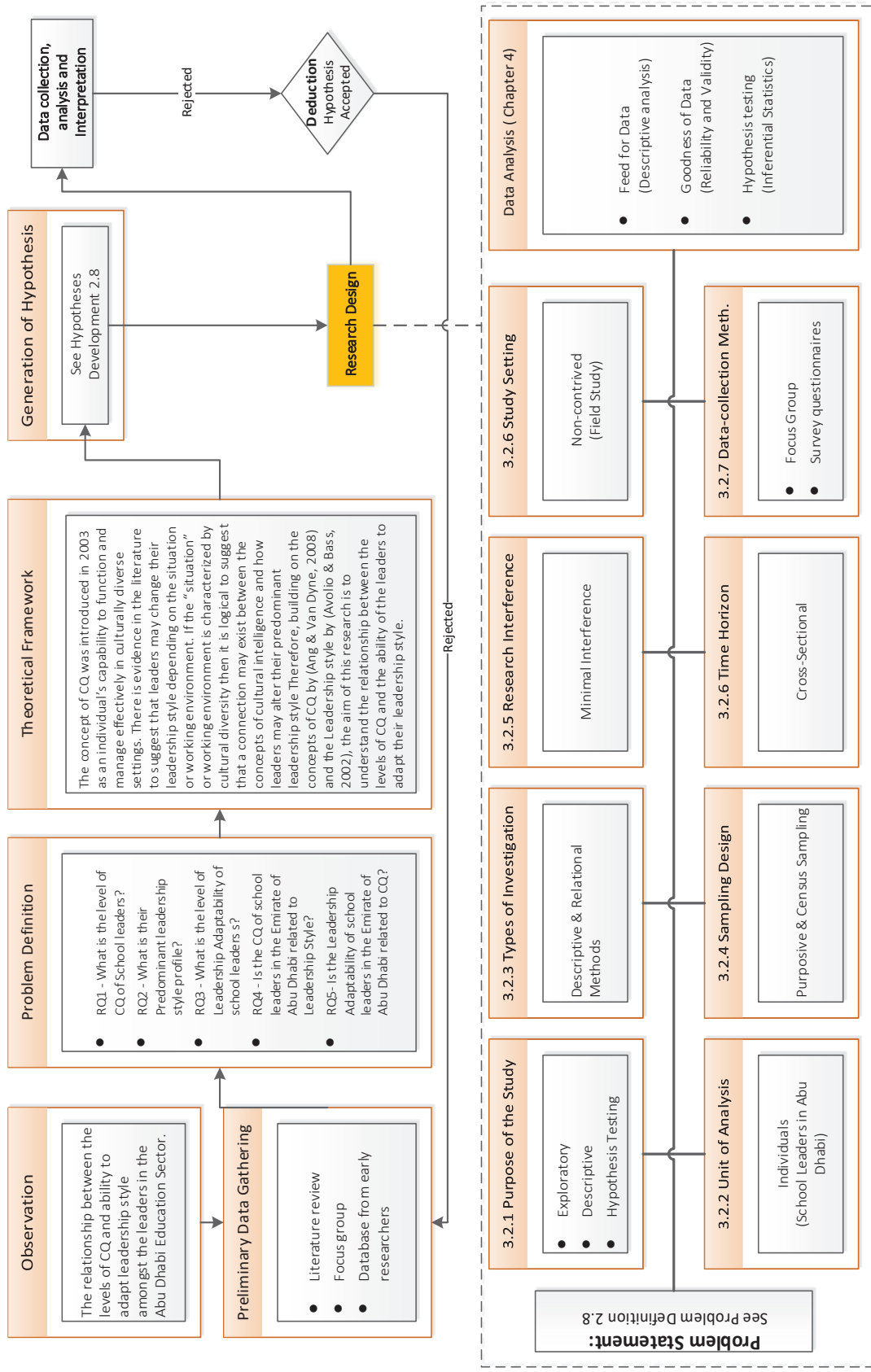


Figure 3.1 The Research Process and Design (Source: Based on Sekaran, 2005)

3.2.1 The Purpose of The Study

In the literature review chapter, it was identified that there is a need to not only address gaps in the field of CQ, but also address gaps in the research in the area of CQ and its application to leadership, adaptability, and the UAE education sector.

The research described in this thesis adopts several methodological approaches in order to meet these needs. Already noted is the ‘fundamental’ approach to research, investigating issues which occur across organisations. Further, a mixed-methods approach is adopted, utilising both a quantitative perspective through the use of a questionnaire, and a qualitative approach through the use of focus groups. The study is exploratory in nature, collecting data in new geographical locations, with new subjects, and with new instruments. The data will be used during analysis to describe the characteristics of the participants, understand the relationships between these characteristics, and the nature of these relationships.

A summary of the aim, objectives, questions and hypotheses is as follows:

Research Aim: to understand the relationship between the levels of cultural intelligence and the ability to adapt leadership style amongst the leaders in the Abu Dhabi Education Sector.

Research Objectives:

1. To estimate the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi.
2. To identify the predominant Leadership Style of school leaders in the Emirate of Abu Dhabi.
3. To estimate the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi

4. To establish the degree to which Cultural Intelligence, Leadership Style, and Leadership Adaptability are related.

A number of research questions and associated hypotheses will be under test in this thesis, and are as follows:

Research Question 1: What are the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi?

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are not significantly different from the normative CQ level

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are significantly different from the normative CQ level

Research Question 2: What is the predominant leadership style profile of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level

Research Question 3: What is the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of LA for school leaders in the Emirate of Abu Dhabi is not significantly different from the LA scale midpoint of 4.0 (moderate LA)

H₁: The average level of LA for school leaders in the Emirate of Abu Dhabi is significantly different from the LA scale midpoint of 4.0 (moderate LA)

Research Question 4a: Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style?

H₀: There is no relationship between Leadership Style and Cultural Intelligence

H₁: There is a significant relationship between Leadership Style and Cultural Intelligence.

Research Question 4b: Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence?

H₀: There is no relationship between Cultural Intelligence and Leadership Adaptability

H₁: There is a significant relationship between Cultural Intelligence and Leadership Adaptability

3.2.1.1 Hypothesis testing

Sarantakos (2005) explained that the testing of hypotheses is undertaken in a descriptive and logical manner during a qualitative study, but through a statistical, quantitative approach in a quantitative study. Hypothesis testing is predominantly utilised to explain the nature of particular relationships, or to establish the differences between groups, or the independence of two or more factors in a specific situation.

This research attempts to explain the relationship between the levels of cultural intelligence and the ability to adapt leadership style amongst the school leaders in Abu Dhabi Education Sector.

3.2.2 The Unit of Analysis

Yin (2012) defined the unit of analysis as the case's source of information. Simply put, it is the 'who' or 'what' that is being analysed in the study. This could include:

- Individual
- Group
- Artefacts (books, photos, newspapers)
- Geographical (town, census tract, city)
- Social interactions (dyadic relations, divorces, arrests)

Researchers define this as the 'unit of analysis' (rather than, say, the 'unit of sampling') because it is the analysis a researcher does throughout their study that determines what the unit actually is. The choice of the unit of analysis rests on the questions being tackled, and the level of generalisation of the research results (Judd et al, 2001).

Throughout any research project, researchers must avoid the *fallacy* (defined as an error in reasoning, often resting on mistaken assumptions) that often arises in generalisation, where the unit of analysis is not at the same level as the unit to which generalisation is sought. Trochim and Donnelly (2006) also described two key fallacies – the *ecological fallacy* and the *exception fallacy*. The *ecological fallacy* can happen when a researcher draws conclusions about individuals based on the analysis of group data. The *exception fallacy* is essentially the reverse – when conclusions are reached based on the analysis of exceptional cases.

These fallacies underline the importance of quality in research. It is essential to determine empirically how individuals perform and not to just rely on group averages. It is similarly critical that researchers look at whether there are correlations between certain behaviours and particular groups. The unit of analysis for this research will be “individual” school leaders in the emirate of Abu Dhabi.

3.2.3 Types of Questions and Investigation

Researchers can utilise three basic question types during any research project, dependant on the type of investigation they are undertaking:

Descriptive: A descriptive study is designed to allow a researcher to describe the characteristics of variables in a particular scenario. Simply, it is a study aimed at describing what is happening, or what exists.

Relational: A relational study aims to investigate the connection between two or more variables. This can be either looking at the nature or the pattern of the relationship.

Causal: A causal study aims to check whether one or more variables causes or effects one or more outcome variables.

The three types can be viewed as cumulative, with the relational study requiring a researcher to first describe each of the variables that researcher is trying to relate, and a causal study assuming a researcher can both describe cause and effect variables, as well as show how they relate to each other.

In this thesis, descriptive and relational questions are addressed. The descriptive methods will describe the level of CQ among school leaders in the Emirate of Abu Dhabi as well as their

dominant leadership style and ability to adapt their leadership style. The relational method will be used to present the relationship between the levels of CQ and both leadership style and the ability to adapt leadership style amongst the school leaders in the emirate of Abu Dhabi.

3.2.4 Sampling

The selection of a sampling strategy is an important aspect of research and can assist to identify representative and bias issues. This is crucial, as it can then be asserted that the data gained through sampling is properly representative of the total population being studied. In addition, it helps to ensure that the data collection has been undertaken free of any bias (Cohen et al., 2007). Sampling can be conducted in two key styles – *Probability sampling (Random Sampling)* and *Non-probability Sampling*.

The sample used in this research can be classified as ‘purposive’ and ‘census’ sampling. It is purposive in that the research was purposefully focussed on the school leaders in Abu Dhabi; and it is census sampling, as it targets *all* school leaders in Abu Dhabi. The main source of contact details for Abu Dhabi school leaders (private and public) was the UAE ministry of education and mainly the Abu Dhabi Department of Education and Knowledge (ADEK). After contacting ADEK headquarters in Abu Dhabi, a list of all school leaders contact details was provided and permission was granted to contact the school leaders from the list.

3.2.5 Researcher Interference

Researchers can influence both types of research methods (qualitative and quantitative). For the quantitative questionnaire component, this was reduced in the survey for this research because it was conducted electronically with no direct face-to-face contact between the researcher and the participants. In addition, confidentiality was guaranteed to participants when

the survey was administered. Contrast this approach with the researcher influence that might have occurred if face-to-face interviews had been employed. There, the direct presence of the researcher (interviewer) would be more likely to be able to influence respondents. In addition, interview results would have to be analysed qualitatively, which would potentially allow the researcher to influence the coding of responses. Overall, it was felt that an electronically administered questionnaire would increase the possibility of having school leaders give the most honest responses, as opposed to carrying out face to face interviews, where the presence of the researcher may exert some influence on the school leaders to give the researcher the response they thought was expected.

Regarding the focus group setting, the level of researcher interference might be expected to be greater, and the researcher took appropriate steps to minimise this interference.

Firstly, the focus group was held in a pre-arranged venue through direct meetings with the researcher. The researcher then had to introduce the topic of CQ, give instructions as to how the session was to be conducted as well as answer some queries throughout the session. However, while the possibility of researcher interference might be present under such circumstances, it must be stated that the participants were all senior school leaders and professional people, who were more than able to state their own mind and opinions. Also, confidentiality was guaranteed to the participants at the outset and, as a result, they knew that identifiable individual opinions would not be shared with anyone outside the focus group. Last, the nature of discussions were not about them personally; rather it was about their experiences with cultural intelligence, leadership and leadership adaptability. Therefore, it is not credible that researcher interference had a significant effect on the outcomes of the focus groups.

3.2.6 Time Horizon

This research has taken a cross-sectional approach because this is sufficient for answering the research questions. Focus groups were held on 26 of November 2014 and the survey for this research was carried out in Abu Dhabi on 11 of November 2015.

3.2.7 Data Collection Methods

Below is a brief examination of the methods and their relative merits for specific research studies.

3.2.7.1 Qualitative and Quantitative Research

Trochim, (2006), contends that researchers can call data ‘quantitative’ if it is in numerical form, and ‘qualitative’ if it is not. Quantitative research looks for “distinguishing characteristics, elemental properties and empirical boundaries” (Horna, 1994). This means that these studies, in general, measure “how much” or “how often” (Nau, 1995). On the other hand, qualitative research is generally linked with interpretative approaches – taken from the subject’s emic point of view rather than measuring observable behaviour (Jones, 1997).

A number of authorities have supported the use of a single research methodology, though they have largely based these assertions on practical considerations such as the need to limit the range of a study, pressing time constraints, and the difficulty of publishing a study’s findings (Creswell, 1994; Jones, 1997). Other authors contend that a mixed methodology can focus on the relative strengths of both, allowing a researcher to “*view a subject from different perspectives, and hence the sources of information obtained allow a more in-depth view of the subject under study*” (Halfpenny, 1979). A researcher should, therefore, strive to achieve a

situation where “*blending qualitative and quantitative methods of research can produce a final product which can highlight the significant contributions of both*” (Nau, 1995; Langrish, 1993).

Many writers have contended that qualitative and quantitative methods can be competently combined in a mutually-beneficial and pragmatic approach (Eisner and Peshkin, 1990; Phillips, 1990; Schofield, 1990; Tashakkori and Teddlie, 1998; Johnson and Onwuegbuzie, 2004; Buchanan and Bryman, 2007). This can help to: 1) triangulate data and minimise the weaknesses of either paradigm (Tashakkori and Teddlie, 1998), as well as reinforcing the validity of research (Rhein, 2013); 2) provide for “*methodological pluralism or eclecticism, which frequently results in superior research*” (Johnson and Onwuegbuzie, 2004); and 3) fulfil the mutual aim of better comprehending the reality in which we function (Haase and Myers, 1988).

Denscombe (2008) states that the mixed methods approach has developed as a third distinct model for conducting social research. Collins et al., (2006) identifies four expansive rationales why such research would be undertaken using this method:

1. *“To improve the accuracy of their data;*
2. *To produce a more complete picture by combining information from complementary kinds of data or sources;*
3. *As a means of avoiding biases intrinsic to single-method approaches (i.e. as a way of compensating specific strengths and weaknesses associated with particular methods; and*
4. *As a way of developing the analysis and building upon initial findings using contrasting kinds of data or methods”.*

To conclude, considering the complex nature of the phenomena under investigation, a mixed methods approach is warranted. These three complex, relatively new, and difficult to measure constructs are not easily captured by a simple quantitative scaling approach alone. Therefore, this research utilised both qualitative and quantitative methods. Initial focus groups are held with school leaders in order to develop the understanding of the UAE educational context, and facilitate the generation of additional leadership adaptability questions used in the quantitative questionnaire. The quantitative questionnaire was distributed to all school leaders identified in the sample.

Therefore, the researcher had the choice of three main methods, namely *interviews, focus groups, administering questionnaires, and observing people and phenomena*. Each method has its own strengths and weaknesses that must be borne in mind when making the decision (Jobber, 1986).

Interviews, Focus group, Questionnaires, and Observations

Burgess (1994) states that an *interview* provides the opportunity for a researcher to probe deeply into a subject, opening up new dimensions to a problem, and securing detailed and accurate accounts based on personal experience. At the same time, face-to-face interviews are often difficult to arrange due to aspects such as time constraints, the sensitivity of the subject matter, and the varied willingness of subjects to be interviewed.

Focus group - A focus group is “a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive, although not necessarily representative, sampling of a specific population; this group being ‘focused’ on a given topic” (Thomas et al., 1995, p. 209). It can therefore be seen that this research technique requires participants to be chosen on the basis that they will have views on the particular topic. They

will also be within the chosen age-range, have similar socio-characteristics to the other participants, and will be at ease talking with the interviewer and with the wider group (Richardson & Rabiee, 2001). Selecting participants in this way consequently relates to the idea of ‘applicability’ which, as Burrows & Kendall (1997) explain, requires research subjects to be picked due to their knowledge of the area under investigation. Put simply, it is assumed a participant must know something of the subject matter to express a useful opinion upon it.

Questionnaires – a pre-formulated set of written questions translated from the research objectives – aims to circumvent some of these difficulties by allowing respondents to participate at their own convenience. Email surveys also allow a widely dispersed sample to be reached simultaneously, and at a relatively low cost to the researcher. In addition, the exact same instrument can be delivered to each person, allowing for a relatively straightforward comparison of responses.

On the other hand, mail questionnaires have been criticised by many commentators because the response rates are often very low. Even so, while face-to-face interviews may achieve a higher response rate, the qualities of mail questionnaires can be strong enough to still recommend their use – particularly where an estimate can be made of the effect of non-response (see, by way of example, Kanuk and Berenson, 1982, and Moser and Kalton, 1971).

Observation of a relevant population and its environment is the most basic of data collection methods. It is most useful for exploratory studies where the researcher is investigating a subject matter in which they are not currently experienced enough to formulate a detailed research focus or hypothesis (Silverman, 2013; Kinnear & Taylor, 1996). The downside to this form of research is that data is often not accessible or readily observable (Tull and Hawkins, 1993). It can also be exceedingly time consuming, with a researcher either spending a great deal of time

waiting for something to observe or, conversely, being inundated with too much observable data (Moore, 1987).

This synopsis of research methods has illustrated that each method has its own associated strengths and weaknesses and that no single method is always the most appropriate. Because of this, a variety of methods are employed in this thesis. The following section elaborates on the research methods chosen and makes a justification for each chosen option.

With unlimited time, resources and co-operation, this research might have been carried out via in-depth face-to-face interviews with each willing school leader in the emirate of Abu Dhabi. However, such an approach would have its own problems, such as, how the data would be coded, the implications for reliability and validity, etc. Furthermore, because of the sensitive nature of the topic, it would likely have been difficult to arrange interviews with willing school leaders without any prior contact. Therefore, the main data collection methods to be used in this research are: focus groups and e-mail questionnaires. It is felt that both these methods are complementary and will incur the maximum benefits of the mixed method (qualitative and quantitative) approach. Both the focus groups and questionnaire processes will be discussed in the next sections.

3.2.7.2 Focus groups

In this research, focus groups were carried out to a) identify any key issues or areas of concern relating to the research topic from a school leaders' perspective; b) generate direct information to help in the formulation of the theoretical framework for the research and c) identify potential covert factors, that may be underlying the key issues, so that they can be identified and subsequently integrated into the final research instrument (additional questions for the questionnaire).

In order to understand how the two concepts of CQ and Leadership Style might interact with one another, and to enable the researcher to shed light on the notion of leadership adaptability, a new set of questions was required that would connect the two concepts. Hence, the primary task of the focus group sessions was to develop an understanding of the experience of school leaders in adapting their leadership style when working in multicultural environments. The secondary task of the focus group sessions was to enable the researcher to develop adaptability questions that could be used as part of the main data collection.

The questions for the semi-structured focus groups were informed by a literature review on the subject of leadership, and particularly on the notion of adaptability, as well as the literature on cultural intelligence. The focus groups were all held on 26th of November 2014 and aimed to bring together Principals and Vice-Principals from Public and Private schools in Abu Dhabi, enabling an informal discussion around the topics of leadership, adaptability, and cultural intelligence, and how these interconnect in practice when leaders are dealing with multicultural employees. Three focus groups took place in total: one with only private school leaders, another with only public school leaders, and finally a group with a mix of private and public school participants.

The focus groups were facilitated by asking about the issues of cultural intelligence amongst leaders of schools. Following a semi-structured style, the partially standardised questions were used to encourage discussion and to meet the objectives of the research. Additionally, prompts were designed within the question set to further prompt participants to engage in the focus group.

In order to ensure that participants from the three focus groups understood the objectives of the research, as well as the terminology and the focus group objectives, a short briefing was undertaken by the facilitator prior to the start of the discussion. As a result, a necessary rapport was established between the facilitator and the participants, which maximised the sharing of ideas and enabled the discussion to take place as the participants understood the research. A rapport was particularly useful in order to avoid negative experiences associated with focus groups (Krueger and Casey, 2009). Through informal discussion between the facilitator and participants, the flow was sustained regardless of whether the participants reached a consensus (Braun and Clarke, 2013).

The researcher was concerned about data quality issues resulting from the level and breadth of answers that the focus groups produced as a result of the relatively small sample of participants. Critics of this approach have argued that, on many occasions, focus groups are not able to truly represent the population at large due to relatively small samples which have not been tested scientifically (for more criticism see Krueger and Casey, 2009; Saunders et al., 2012; Sekaran & Bougie; 2013). In the case of this research, the whole population of school leaders in Abu Dhabi was offered an opportunity to attend the focus group, with one limitation – a set date.

Focus group implementation: In order to start the focus group preparation, the researcher approached the Abu Dhabi Department of Education and Knowledge (ADEK) for clearance for the research and, as soon as the permission was obtained, the work was started. Having sent letters of invitation to 441 potential participants out of a total sample of 443 (the researcher did not have the correct email address for two of the potential participants), 24 individuals from a mixture of public and private schools agreed to participate in the focus groups. However, only 14 individuals presented themselves on the day. The researcher did not know individuals personally. Indeed, confidentiality was part of the condition for participation. The focus groups

were conducted in English, which was not the native language for some of the participants, and this is recognised as a limiting factor in these focus groups. However, it is a good indicator of the previously described multi-cultural nature of the population of school leaders in the UAE.

Focus Group Transcripts Analysis - Garcia and Gluesing (2013) argue that the way a researcher constructs the data collection has potential implications on the way in which the data is analysed. Specifically, qualitative data should allow for a theory to emerge. Furthermore, the research project can achieve its set objectives through effective analyses of the data collected. Krueger and Casey (2009) suggest that analysis of the data has to be “practical, systematic and verifiable”. The objective of this part of the research was to identify the questions linking the two concepts - “full range leadership style” and “cultural intelligence” - through the lens of adaptability, which is very important in the context of the UAE. Therefore, the exploratory nature of the focus group technique calls for analysis of qualitative data collected through this medium, which requires categorisation prior to analysis (Saunders et al., 2012).

There are a number of approaches that could have been adopted within this research to analyse the data collected in the three focus groups. The researcher adopted traditional manual coding of the textual data, with each paragraph in the typed extended field notes being identified as a unit of analysis. Individual or multiple codes have been attached to each paragraph, which were derived from the secondary literature on the subjects of leadership and cultural intelligence. This task was repeated numerous times resulting in numerous iterations of this step. Having re-read all the transcripts and coding, the researcher listened to the audio recordings of the focus groups one final time to ensure nothing was missed in the recorded files. This step enabled the researcher to check that the core codes assigned to each paragraph were assigned appropriately, and to extend coding where necessary.

The researcher conducted initial searches for similarities and differences emerging from both within and across the focus group transcripts. Themes were assigned to similar codes enabling the development of higher-level codes, with various dimensions as sub-codes forming core themes. The researcher devised a visual presentation of the key themes (See chapter 4 section 4.3).

The process of transcribing involves reproduction of actual words in written form (Saunders, et al, 2012). As the process is very lengthy and time-consuming, only the main points of the discussion were transcribed in extended field notes as, on occasions, the focus groups lost their focus and relevance to the objectives. The text of the focus groups has been coded and categorised in relation to each participant in each of the focus groups, as well as the setting of the school (public / private) that they worked at.

Inter-Coder Reliability - To ensure the validity and reliability of the data analysis, the theoretical themes emerging from the data were cross-checked by means of coding a selection of data by the researcher and additional two individuals familiar with content analysis, having extracted the common themes from the focus groups, the focus group transcript was then given to two other individuals who were asked to extract the key themes from information. The three sets of data indicated that there were no major inconsistencies or discrepancies and so the key themes from the focus group were formalised (for more details please see chapter 4 – Focus group analysis).

The key dimensions that emerged from the focus group were:

- Expectations of leaders' behaviour
- Flexibility and adaptability
- Personal characteristics of the leader

- Use of cultural strategies
- Language / Communication
- Influence of institutional environment

Based on these six themes, 13 new questions (see Appendix 6, Part 3) were developed and were used in the questionnaire. A paper resulting from this thesis describes the focus group methods and findings was published (Aldhaheri, 2017).

3.2.7.3 Questionnaire Construction

Research in the UAE is not well developed and so it was important to obtain support and permission from the regulatory bodies in order to proceed. The Abu Dhabi Department of Education and Knowledge Department (ADEK) gave permission for the researcher to carry out this research. They also supplied the researcher with a letter of support which could be attached to all questionnaires in order to show school principal that this was a legitimate questionnaire which was endorsed by the regulatory body. This support from ADEK was invaluable and no doubt ensured a good response and participation rate.

In this section, two aspects of questionnaire construction are covered; the questionnaire instrument, and the response scales used.

The Instrument

The research instrument contained four parts; the first, measuring cultural intelligence, is the *Cultural Intelligence Scale (CQS)* - (see Appendix 6 – Part 1), developed by Ang et al. (2008). The *Multifactor Leadership Questionnaire (MLQ5X)* was used to assess leadership style - (see Appendix 6 – Part 2), developed by Bass and Avolio (1995). The questionnaire instrument also

included *13 new questions* - (see Appendix 6 – Part 3), developed as a result of the focus group sessions and focused on leadership adaptability. The questionnaire instrument also contained a number of socio-demographic questions (see Appendix 6 – Part 4).

The Cultural Intelligence instrument measures the multi-faceted characteristic of individuals' cultural intelligence by assessing their intelligence through meta-cognitive, cognitive, behavioural, and motivational facets and relies on the 20-item Cultural Intelligence Scale (CQS) (Ang et al., 2008).

The CQ scale has gone through an extensive validation process, and research demonstrates that it is generalizable across a) multiple student and executive samples, b) time intervals ranging from four weeks to four months (c) countries such as Singapore, the U.S, Ireland (d) both global and domestic culturally diverse samples (Van Dyne et al, 2012. The CQS has also been cross validated across various samples, across time, and across countries (Ang et al., 2007; Moon, 2010a; Ward et al., 2009), (see Appendix 7).

However, while there is evidence to suggest and support the validity of the CQS, there is no evidence to suggest that it is valid in a UAE setting, nor an education sector. While testing the validity of the CQS within a new context and setting is not a specific objective of the research it may constitute one of the outcomes. Use of the CQ scale in a new context and setting answers the call for further CQ research in new sectors and geographical locations by Ang et al (2010).

Multifactor Leadership Questionnaire (MLQ5X) - to investigate the leadership styles a Multifactor Leadership Questionnaire (MLQ5X) will be used (Bass and Avolio, 1995). The MLQ5X is the most widely accepted instrument currently used to assess transformational leadership (Bass and Riggio, 2006). In addition to transformational leadership, the MLQ5X

also measures transactional and laissez-faire leadership or the full range of leadership model. The MLQ5X contains 36 items and measures the five factors of transformational leadership, two factors of transactional leadership and two factors of laissez-faire approach. Each statement describes a behaviour associated with a leadership style and asks the individual to assess the frequency of their use of that behaviour. In this study, the school leaders are asked to self-report their frequency of behaviour. The MLQ5X model can be used as a 360-degree instrument, whereby 'followers', such as subordinates, also give their frequency of the leader carrying out a behaviour. In this study, only leaders were asked for frequency of behaviour, as it was neither possible nor viable to allow representative ratings. The nine items measuring 'leadership outcomes' are not included in this research, as they are intended to be used by followers only, who, as noted, are not included in this study.

The MLQ5X has been used in more than 200 research studies, and its reliability and validity as a tool for determining leadership styles in both service and industrial organizations has been established (Spinelli, 2006). This leadership assessment tool has been tested and verified as a reliable assessment tool in several previous studies (Avolio, Bass, & Jung, 1999; Avolio & Bass, 2004). According to Whitelaw (2001), "the comparative studies and replication studies confirm that the MLQ5X can be considered a reliable and valid instrument". Avolio and Bass (2004) indicated that the construct validity and reliability of the questionnaire have been tested by examining 14 independent samples that included 3,786 respondents.

As there is no validated scale that can be used to measure leadership adaptability, the researcher developed a new scale to measure leadership adaptability. This scale consisted of 13 questions which were developed from the focus groups in order to measure whether school leaders adapt their leadership style.

Regarding socio-demographic questions in the final questionnaire, the aim of the 13 questions was to capture information relating to the participants. These included questions related to gender, nationality, type of school, level of education, managerial experience, languages spoken, and countries visited.

Scales

Questions will usually make use of scaling, which is defined as the assignment of objects to numbers according to a rule. In most scaling, the objects are text statements – usually a statement of opinion or belief. It is important not to confuse this concept with response scale, which is the method researchers use to collect responses on an instrument. In this instance, researchers might use a dichotomous response scale (for example, Agree/Disagree, True/False, Yes/No), or an interval response scale (such as giving a 1 to 5 rating). However, this is not scaling, as it does not involve procedures performed independently of respondents that produce a numerical value for an object. In true scaling research, researchers use a scaling procedure to develop their instrument (scale) and they also use a response scale to collect the responses from participants Trochim and Donnelly (2006). For this research, Likert response scale formats were used.

The seven-point Likert response scale was used in the Cultural Intelligence Scale (CQS) as used originally by Ang. et al. (2008) to measure the level of cultural intelligence among school leaders in the emirate of Abu Dhabi. This scale asks respondents to what degree they agree or disagree with a statement. Responses are on a 1-7 scale, with 1 indicating ‘strongly disagree’, and 7 indicating ‘strongly agree’.

The researcher also used a validated questionnaire, the *Multifactor Leadership Questionnaire (MLQ5X)* to assess the leadership style using a five-point interval (Likert)¹ scales as developed by Bass and Avolio (1995). This scale is from 0-4, with 0 indicating that the leader's frequency of a particular behaviour is 'not at all', and 4 indicating 'frequently, if not always'.

For the 13 leadership adaptability questions developed in the focus groups, a seven-point interval Likert response scale was used and matched the 1-7 scale used for the CQ scale. In the questionnaire, detailed instructions were given in each section on the nature of the questions and how to apply the scale to respond to the questions. For the 13 socio-demographic questions, response options were unique according to the question.

The Process of Instrument Translation

Table 3.1 outlines the step-by-step process adopted for the translation of the research instrument. Prior to proceeding with the translation process, it is important to undertake an assessment to identify whether there is the same relationship between the questionnaire and underlying concept in both the instrument's original (English Language) and target setting (Arabic Language) (Herdman et al., 1998, and Reichenheim & Moraes, 2007). It is also necessary to establish if the elements of the research instrument are equally applicable and

¹ Likert scales were developed in 1932 by Likert, R., as the familiar five-point bipolar response format most people are familiar with today. These scales always ask people to indicate how much they agree or disagree, approve or disapprove, believe to be true or false. Likert scales involve the use of a standardised set of responses that can be used to answer a variety of questions or statements. Any scale where researcher force respondents to use the same, standardised response categories, and where those response categories are ordinally related to one another (ranked) is a Likert scale.

relevant to the new target population (Herdman et al., 1998). Assessing the equivalence of the underlying concept and the item equivalence was achieved by conducting a detailed literature review. The findings from the literature review were also discussed and augmented through consultation with subject-matter experts and members of the target population (Herdman et al., 1998, and Reichenheim & Moraes, 2007).

Table 3.1 The Translation Process

Original instrument translated	Translator I: Fluent in target language, good understanding of original language Translator II: Fluent in target language, good understanding of original language
Synthesise translated version	Translator III: Fluent in target language, good understanding of original language
Back-translate synthesised version	Back-translator III & IV: Fluent in original language, good understanding of target language
Evaluated by the researcher	To ensure that individual words and phrases reflect the identical ideas or concepts in both original and adapted instruments
Instrument pre-tested	Tested to identify confusing or misleading items
Instrument revised	If needed
Evaluation of operational equivalence	Consult with experts in the field and members of target population
Produce final instrument	

The translation process for this research began with the original instrument being translated from its original language (English) into the target population’s language (Arabic) (Herdman et al., 1998; Reichenheim & Moraes, 2007; Beaton et al., 2000, and Guillemin et al., 1993). This was independently performed by two translators who possess a good understanding of the

instrument's original language as well as being fluent in the target population's language (Beaton et al., 2000; Guillemin et al., 1993; Wang, Lee, & Fetzer, 2006; Herdman et al., 1998; Reichenheim & Moraes, 2007). A third independent translator then synthesised one version from the two translated instruments (Beaton et al., 2000; Guillemin et al., 1993).

Following this, the new synthesised instrument was independently translated back into the original language by two different translators (Beaton et al., 2000; Guillemin et al., 1993; and Wang, Lee, & Fetzer, 2006). These translators needed to be fluent in the original instrument's language, with a solid understanding of the target population's language (Herdman et al., 1998; Reichenheim & Moraes, 2007; Beaton et al., 2000; and Guillemin et al., 1993). The resulting synthesised translation and back-translated instruments were then passed to the researcher to be fully reviewed. Through this process, the researcher ensured that the instrument was correctly translated, as well as being relevant to the new population setting. The job of the researcher was to assess whether individual words and phrases reflect the identical ideas or concepts in both original and adapted instruments. Therefore, this research can be thought as a first contribution to fulfil the lack of self-report CQ scale in the Arabic context, which can be available for more than 400 million Arabic speaking users.

Survey implementation

Beaton et al., (2000) state that a translated instrument should then be pre-tested. The researcher pre-tested the instrument with four participants: an English native speaker (private school); an Arabic native speaker (private school); an English native speaker (public school); and an Arabic native speaker (public school). Upon completion of the questionnaire, respondents were asked if they faced any difficulties filling out the questionnaire. The resulting answers enabled the researcher to amend the questionnaire, especially in regard to phrasing and questionnaire format.

The questionnaire for the survey consisted of four parts. The first part covered the 20 CQ questions; the second part covered the 36 questions covering leadership style using the MLQ5X scale; the third part covered the 13 questions regarding leadership adaptability; and the final part asked 13 socio-demographic questions.

The questionnaire was self-administered. The researcher has obtained full contact list of leaders from the Abu Dhabi Department of Education and Knowledge (ADEK). There is a total sample of 443 schools: 257 public schools and 186 private schools in the Emirate of Abu Dhabi (Ministry of Education).

The questionnaires were emailed to 257 public school leaders and 186 private school leaders on the 11th of November 2015. To allay any fears of confidentiality or authenticity, the questionnaires (see Appendix 6) were accompanied with an email covering contextual information (see Appendix 11) and offering explanation of the aims of the study, its benefits, the importance of each leaders reply for the study's success, and the guarantee of confidentiality and statement that the results will be used for academic purposes only. Each questionnaire was also sent with a letter of endorsement from ADEK, to add credibility to the request.

A response book was kept by the researcher in order to keep a record of all those school leaders who responded to the questionnaire, and likewise to identify the school leaders who did not respond. One week after the initial email and questionnaire were sent out, a reminder email was sent to those school leaders who were identified as being non-respondents. This was worded as a gentle reminder, and this was reflected in the tone of the email. To further encourage participation, a second follow up email was sent two weeks after the first follow up (three weeks after the original questionnaire was circulated). This email reaffirmed the

importance of the study and emphasized that the participation of all school leaders was vital to the success of the research.

Each subsequent email served its purpose and had the effect of generating further responses. The response rate reached 37.7% which was deemed to be an acceptable result (Response rates are covered in Chapter 4).

3.3 Validity and Reliability

3.3.1 Validity

Hammersley's (1987, p. 69) defines research 'validity' as *"an account is valid or true if it represents accurately those features of the phenomena that it is intended to describe, explain or theorise"*.

At this stage of the research it is very important to address the concept of validity within qualitative and quantitative research.

Trochim and Donnelly (2006) state that, "the traditional criteria for 'validity' find their roots in a positivist tradition and, to an extent, positivism has been defined by, and boosted along by, a systematic theory of 'validity'. Within the positivist terms, 'validity' existed amongst, and was the result and conclusion of other empirical conceptions: universal laws, evidence, objectivity, truth, reality, inference, reason, fact, and mathematical data, to name just a few. It is within this tradition and terms that quantitative research is traditionally defined. Qualitative research, arising out of the post-positivist rejection of a single, static or objective truth, has concerned itself with the meaning and personal experience of individuals, groups and sub-cultures. 'Reality' in qualitative research is concerned with the negotiation of 'truths' through a series of subjective accounts. Whereas quantitative researchers attempt to disassociate themselves as much as possible from the research process, qualitative researchers have come to embrace their involvement and role within the research. For quantitative researchers, this involvement would greatly reduce the validity of a test, yet for qualitative researchers denying one's role within research also threatens the validity of the research" (p. 269).

There are four types of validity, these are: external validity, internal validity, conclusion validity and construct validity. The most relevant one for this research is construct validity.

External validity is related to generalising. External validity has to do with possible bias in the process of generalising conclusions from a sample to a population, to other subject populations, to other settings, and/or to other time periods (Garson, 2001).

In this study, the researcher started by obtaining the full list of school leaders in the emirate of Abu Dhabi (census). Then, the researcher conducted the research with that full/complete census sample. Therefore, as the sample is representative of the population, all results may be generalised back to the population, subject to response rate issue.

Internal validity is concerned with the approximate accuracy of conclusions that involve cause-effect or causal relationships. It is, therefore, not generally relevant in observational or descriptive studies, but is potentially the primary consideration in studies that investigate the effects of social programmes or interventions (Trochim and Donnelly, 2006). Despite this, internal validity is not a concern here because causal relationships are not being investigated for this study.

Conclusion validity - It is relevant wherever and whenever the researcher is trying to discern if there is a relationship within their observations – (and that’s one of the most basic aspects of any analysis).

In order to ensure conclusion validity, the researcher employed three main tools; ensure that the statistical power is high, ensure high levels of reliability and ensure consistent implementation of measurement.

In relation to statistical power, there are four related factors that can influence the conclusions that are based on statistical outcomes; sample size, effect size, alpha level and power. Each of these components will vary depending on the research context and the aim is to reach a balance between all four factors.

In this thesis, there is full information regarding total population size (i.e. the number of school leaders in the emirate of Abu Dhabi) and all members of the population were eligible to participate in the study. Furthermore, the researcher attempted to achieve solid conclusion validity by standardising the way the questionnaires were administered, and used relevant statistical tests. Further details about the tests are covered in chapter 4.

Construct Validity - The concept of construct validity is focused on assessing the degree to which inferences can properly be drawn from the operationalisation in research study to the theoretical constructs on which those operationalisations were based. It is, then, the approximate truth of the conclusion that the operationalisation accurately reflects its construct. Construct validity is an assessment of how well researchers translated their ideas or theories into actual programs or measures.

For this research, therefore, the assessment of construct validity was focused on the measures used to test the relationship between CQ and the ability of the school leaders to adapt their leadership style. Construct validity is a concern in this study when operationalising the CQ scale, MLQ scale and the new leadership adaptability scale.

Both CQS and MLQ instruments have been previously validated, in multiple settings, with several samples and across several geographical locations. Despite this, further testing of the two scales was carried out in this study using dimension reduction and reliability analysis

techniques. For LA, a newly established scale, which has resulted from focus group analysis, content and face validity techniques were used to develop the 13-questions survey. Further statistical testing to understand its dimensionality and reliability is tested during this research.

3.3.2 Reliability

Carmine and Zeller (1979) define research 'reliability' as "*the tendency toward consistency found in repeated measurements of the same phenomenon*" (p. 72). Reliability is related to measurement, which is assessed by the degree to which it is affected by factors that are designated either random error or systematic error/bias.

Carmine and Zeller (1979) explains further "*a highly reliable indicator of a theoretical concept is one that leads to consistent results on repeated measurements because it does not fluctuate greatly due to random error*" (p. 13). Chase et al. (1978) asserts, random error is present when chance factors occur in ways that cannot be predicted, i.e. "*neither the direction nor the magnitude of these errors can be predicted*".

The main problem relating to reliability is controlling for error. Reliability is expressed in terms of scores.

Reliability can be expressed as the ratio between the true score and the true score plus the error score. That is:

True Score

True Score + Error Score

This shows that the measure of reliability will always be between 0 and 1, where 0 indicates complete unreliability, and 1 demonstrates perfect reliability (no random error components whatever; all the items measure exactly the same thing) (Frankfort-Nachmias and Nachmias, 1996; Judd et al, 1991). Improving the level of reliability is therefore a matter of decreasing the error score.

Reliability can, however, only be estimated, not calculated. This can best be achieved by measuring the degree of correlation between the different forms of a measurement, where higher correlation indicates greater reliability.

This estimate can be classified into one of four categories – inter-rater or inter-observer reliability, test-retest reliability, parallel-forms reliability, and internal consistency reliability (Garson, 2001). The most relevant one for this research is internal consistency reliability.

Internal Consistency Reliability. This approach aims to avoid some of the limitations of the other reliability estimates. It requires researchers to estimate reliability using their single measurement instrument administered to a sample on one occasion. They are, in short, assessing instrument reliability by estimating how dependably items reflecting the same construct yield similar results.

The researcher can use a range of internal consistency measures, including average inter-item correlation, average item-total correlation, split-half reliability, and Cronbach's Alpha (α).

The most widely used internal consistency method is Cronbach's coefficient alpha (Cronbach's, 1951) for multipoint-scaled items, and the Kuder-Richardson formulas (Kuder and Richardson, 1937) for dichotomous items. Cronbach's alpha is produced from the correlations of each item with each other item, and range between 0 and 1, where 0 represents total unreliability and 1 indicates perfect reliability. In essence, the method utilises a computer programme to split the instrument questions every possible way, and then computes correlation values for them all. At the end of the process, the researcher generates a single number that signals the reliability estimate of their instrument. For this research, Cronbach's alpha was used as the index for assessing the reliability of the measurement scales (for the new 13 questions) since it is the most widely used estimator of reliability.

It is generally accepted that an alpha value of more than 0.70 is a recommended minimum for acceptable reliability (Nunnally, 1978; Babine et al., 1994). However, other authors have asserted that lower levels are permissible in the early stages of basic research (Babin et al., 1994; Nunnally, 1967; Robinson, Shaver and Wrightsman, 1991). As the development of the leadership adaptability scale can be considered as being in the early stages of basic research, an alpha co-efficient value of 0.50 was used as the minimum threshold.

3.4 Conclusion

This chapter described the methodologies used in this research to collect data, along with an overview of the theoretical considerations made at each stage. Both qualitative and quantitative methods are used to collect data. Focus groups are used to collect qualitative data on the issues faced by school leaders in UAE with regards to adaptive leadership. The focus group sessions identified a number of items which were developed into a scale to measure leadership adaptability. The new scale was used in a quantitative questionnaire, alongside existing and well tested instruments for measuring cultural intelligence and leadership style. Socio-demographic characteristics of the school leaders were also captured.

The next chapter will focus on the data analysis for this research.

CHAPTER 4: DATA ANALYSIS AND HYPOTHESES TESTING

4.1 Introduction

This chapter presents the results of the focus group sessions and the quantitative data analysis. The chapter is structured into two sections with the first covering the qualitative data gathered in the focus groups (section 4.3) and the second covering the data gathered with the quantitative questionnaire (section 4.4 onwards). One of the goals of the focus group sessions was to develop a scale which was later used in the questionnaire, and to meet two of the objectives. The five research questions are used to structure the quantitative data analyses (sections 4.5 to 4.9). The five questions are listed in section 4.2.3 with accompanying null and alternative hypotheses, and alongside a reminder of the thesis aim and objectives. Each research question will be discussed and a rationale provided as to how the question will be answered and which specific statistical techniques will be used (*Table 4.1*). The response rate and socio-demographic characteristics of the participants are described (section 4.4). The chapter concludes with an overview of the results and the answers to the research questions (Section 4.10).

4.2 Aim Objectives, Research Questions and Hypotheses

In this section, a reminder of the thesis aims and objectives is followed by an expression of the research questions and accompanying hypotheses. *Table 4.1* gives further details for each research question, covering how the data will be analysed and including which tests are to be employed.

4.2.1 Aim of this research

The aim of the research is to understand the relationship between the levels of cultural intelligence and the ability to adapt leadership style amongst the leaders in the Abu Dhabi Education Sector.

4.2.2 Objectives

1. To estimate the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi.
2. To identify the predominant Leadership Style of school leaders in the Emirate of Abu Dhabi.
3. To estimate the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi
4. To establish the degree to which Cultural Intelligence, Leadership Style, and Leadership Adaptability are related.

4.2.3 Research Questions and Hypotheses

To meet the objectives of the thesis, a number of research questions have been identified along with accompanying hypotheses. These are:

1. What are the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi? (section 4.5)

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are not significantly different from the normative CQ level

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi are significantly different from the normative CQ level

2. What is the predominant leadership style profile of school leaders in the Emirate of Abu Dhabi? (section 4.6)

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level

3. What is the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi? (section 4.7)

H₀: The average level of LA for school leaders in the Emirate of Abu Dhabi is not significantly different from the LA scale midpoint of 4.0 (moderate LA)

H₁: The average level of LA for school leaders in the Emirate of Abu Dhabi is significantly different from the LA scale midpoint of 4.0 (moderate LA)

- 4a. Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style? (section 4.8)

H₀: There is no relationship between Leadership Style and Cultural Intelligence

H₁: There is a significant relationship between Leadership Style and Cultural Intelligence

- 4b. Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence? (section 4.9)

H₀: There is no relationship between Cultural Intelligence and Leadership Adaptability

H₁: There is a significant relationship between Cultural Intelligence and Leadership Adaptability

Table 4.1 Statistical techniques employed in order to answer each of the five research questions

Research Question	Further Details	How will the question be answered?	Specific Statistical Techniques
What is the level of Cultural Intelligence of school leaders in the Emirate of Abu Dhabi?	The Cultural Intelligence characteristics of School Leaders in Abu Dhabi are unknown - do the School Leaders have 'high' cultural intelligence, or 'low'. Which elements of Cultural Intelligence are more prominent - strategy, knowledge, motivation or behaviour?	Statistics to understand the scores for each of the 20 questions (variables), analysis to understand relationships between variables and whether the data matches previous research, reliability to test consistency of dimensions identified, further statistics to describe the characteristics of the dimensions	Descriptive statistics, Principal Components Analysis, Confirmatory Factor Analysis, Reliability Analysis and T-Test
What is the predominant leadership style profile of school leaders in the Emirate of Abu Dhabi?	The Leadership Style characteristics of school leaders in Abu Dhabi are unknown - do the School Leaders exhibit 'transformational', 'transactional' or a 'laissez-faire' leadership style?	Statistics to understand the scores for each of the 36 questions (variables), analysis to understand relationships between variables and whether the data matches previous research, reliability to test consistency of elements identified, further statistics to describe the characteristics of the elements	Descriptive statistics, Confirmatory Factor Analysis, Reliability Analysis, and T-Test
What is the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi?	The Leadership Adaptability characteristics of school leaders in Abu Dhabi are unknown - do the School Leaders exhibit 'high', 'low' or 'intermediate' levels of leadership adaptability,	Statistics to understand the scores for each of the 13 questions (variables), analysis to understand the dimensions in the data, reliability to test consistency of elements identified, further statistics to describe the characteristics of the elements	Descriptive statistics, Principal Components Analysis, Exploratory Factor Analysis, Discriminant Validity, Reliability Analysis, and T-Test
Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style?	Is there a relationship between the three leadership styles and corresponding level of cultural intelligence?	Pearson Correlation between Leadership Style and Cultural Intelligence	Pearson Correlation
Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence?	The Leadership Adaptability scale is a new scale developed for use in this thesis - are scores for this scale related to understanding an individuals' cultural intelligence?	Pearson Correlation between Leadership Adaptability and Cultural Intelligence	Pearson Correlation

4.3 Qualitative - Focus Groups Implementation

In this study, a qualitative methodology for scoping potential questions for survey development was adopted through the implementation of the group research interview technique (Braun and Clarke, 2013). In order to understand how the concepts of cultural intelligence and leadership style apply, and to enable the researcher to shed light on the notion of leadership adaptability, a new set of questions was needed that would connect these two concepts. The focus group approach was used to develop an understanding of the experience of school leaders in adapting their leadership style when working in multicultural environments, and to explore the impact of CQ on the level of adaptation of leadership style when operating in a multicultural environment.

The questions for the semi-structured focus groups were informed by a literature review on the subject of leadership, and particularly on the notion of adaptability, as well as the literature on cultural intelligence. The focus groups were all held on 26th of November 2014 and aimed to bring together Principals and Vice-Principals from Public and Private schools in Abu Dhabi, enabling an informal discussion around the topics of leadership, adaptability, and cultural intelligence, and how these interconnect in practice when leaders are dealing with multicultural employees. Three focus groups took place in total: one with only private school leaders, another with only public-school leaders, and finally a group with a mix of private and public-school participants.

The focus groups were facilitated by asking interesting and pertinent questions which raised discussions around the issues of cultural intelligence amongst leaders of schools. The main list of questions is shown in *Table 4.2*. Following a semi-structured style, the questions were used to encourage the discussion to meet the objectives of the research. Additionally, prompts were designed within the question set to further prompt participants to engage in the focus group.

The questions for the semi-structured focus groups were informed by the work of Pulakos and Alad (2005) on “Developing Cultural Adaptability”. It is important to explore each of the four components from the CQ model and use them to form questions to address a real work-related situation. The questions were derived to represent a diverse cultural context and how it may potentially influence leader’s behaviour. Specifically, the questions addressed taking actions to learn about others cultures, understanding cultural differences, actively changing behaviours and understanding the consequences of changed behaviour.

Table 4.2 Questions used in focus group sessions

Focus groups questions
<ul style="list-style-type: none"> ▪ What kind of challenges does cultural diversity among stakeholders create for you as leaders? ▪ In your experience, do leaders adapt their leadership style in the multicultural educational sector? Give examples. ▪ Describe an experience where you have encountered a conflict or challenging leadership situation as a result of cultural differences among stakeholders. ▪ Describe the actions you took in order to resolve this situation? ▪ Think of a time when you had the same situation/experience with two culturally different stakeholders. Did you handle both situations in a similar way or did you have to change your behaviour and actions in order to resolve each situation? Give reasons for your answers.

In order to ensure that participants from the three focus groups understood the objectives of the present research, as well as the terminology utilised, and the focus group objectives, a short briefing was undertaken by the facilitator (researcher) prior to the start of the discussion. As a result, a necessary rapport was established between the facilitator and the participants, which

maximised the sharing of ideas and enabled the discussion to take place. The rapport was particularly needed in order to avoid negative experiences associated with focus groups (Krueger and Casey, 2009), such as lack of trust, for example. Through informal discussion between the facilitator and participants, the flow was sustained regardless of whether the participants reached a consensus (Braun and Clarke, 2013).

As mentioned before, to obtain “new insights”, (Robson, 2002, p.59) focus groups were chosen as the most appropriate method for understanding people and for extracting meanings in relation to the concept under investigation. This method enabled the researcher to see and listen to what people think about leadership and cultural intelligence, and how these concepts get utilised within an Abu Dhabi school setting.

The duration of the three focus groups were, respectively, 1 hour 6 minutes; 1 hour 19 minutes; and 58 minutes. Data were recorded using a digital audio recorder, and then each focus group was transcribed to the level of extended field notes. Subsequently, field notes were manually coded using the content analysis technique, and then re-coded having listened to the full recording. Please find further tabulated information about the focus groups and participants in *Table 4.3* and *Table 4.4*:

Table 4.3 Focus groups details

	Focus Group 1	Focus Group 2	Focus Group 3
Duration	1 hour 6 minutes	1 hour 19 minutes	58 minutes
Number of participants	5	4	5
Type of school represented	Public	Private	Mix of Public and Private schools

Table 4.4 Participant Information

Name	Institution	Private / Public	National / Expat / Years of Experience	Principle / Deputy	Gender	Rural / City
Participant 1	Institution 1	Public	Expat / 15+	Principal	Female	Rural
Participant 2	Institution 2	Public	Expat / 10+	Deputy	Female	Rural
Participant 3	Institution 3	Public	Expat / 20+	Deputy	Female	Rural
Participant 4	Institution 4	Public	Expat / 15+	Principal	Female	City
Participant 5	Institution 5	Private	National / 10+	Principal	Female	City
Participant 6	Institution 6	Private	Expat / 10+	Principal	Female	City
Participant 7	Institution 7	Private	Expat / 20 +	Principal	Female	City
Participant 8	Institution 8	Public	Expat / 15+	Deputy	Male	City
Participant 9	Institution 9	Private	Expat / 10+	Principal	Male	City
Participant 10	Institution 10	Public	National / 15+	Principal	Male	City
Participant 11	Institution 11	Public	Expat / 15+	Principal	Male	Rural
Participant 12	Institution 12	Private	Expat / 15+	Principal	Female	City
Participant 13	Institution 13	Private	Expat / 10+	Principal	Female	City
Participant 14	Institution 14	Public	National / 15+	Deputy	Female	Rural

To minimise the threat of subject or participant error, all focus groups were conducted within the confines of the same room for the convenience of participants. By facilitating and channelling the discussion very closely towards the set questions, the small number of participants in each of the focus groups managed to avoid any potential bias from dominant individuals (Robson, 2009).

The facilitator also acted as a moderator when conducting the focus groups, with technical help recording all of the discussions. To ensure that moderator error did not occur, every focus group strictly followed the interview schedule. It was important that there was no interference from the facilitator through, for example, giving emphasis to particular phrases during questioning which could have potentially stimulated desired answers. This process, established prior to focus group facilitation and the set up, enabled the researcher to reduce the effect of potential biases, and increased the reliability and validity of the data.

4.3.1 Focus Group Transcripts Analysis

Garcia and Gluesing (2013) argue that the way a researcher constructs the data collection has potential implications on the way in which the data is analysed. Specifically, qualitative data should allow for a theory to emerge. Furthermore, the research project can achieve its set objectives through effective analyses of the data collected. Krueger and Casey (2009, p.114) suggest that analysis of the data has to be “practical, systematic and verifiable”. The objective of this part of the research was to identify the questions linking the two concepts - “full range leadership” and “cultural intelligence” - through the lens of adaptability, which is important in the context of the UAE. Therefore, the exploratory nature of the focus group technique calls for analysis of qualitative data collected through this medium, which requires categorisation prior to analysis (Saunders et al., 2012). There are a number of approaches that could have been adopted within this research to analyse the data collected through the three focus groups. The researcher adopted traditional manual coding of the textual data, with each paragraph in the typed extended field notes being identified as a unit of analysis. Individual or multiple codes have been attached to each paragraph, which were derived from the secondary literature on the subjects of leadership and cultural intelligence. Through various interactions of this step, the researcher has gone through the three transcripts of the focus groups. Having re-read all the transcripts and coding, the researcher listened to the audio recordings of the focus groups to make sure nothing was missed from the recorded files. This step enabled the researcher to check that the core codes assigned to each paragraph were assigned appropriately, and to extend coding where necessary.

The researcher then conducted initial searches for similarities and differences that emerged within and across the focus group transcripts, and the themes assigned to similar codes enabled the development of higher level codes, with various dimensions as sub-codes forming core

themes. As the focus groups were constructed to include a range of probing, open-ended, and closed questions, this enabled the researcher to obtain variable and rich responses from participants.

The process of transcribing involves reproduction of actual words in written form (Saunders, et al, 2012). Only the main points of the discussion were transcribed in extended field notes as, on occasions, the focus groups lost their focus and relevance to the objectives. It is also complicated to transcribe the recording of a focus group with multiple participants as it is often hard to distinguish individual voices in the audio. The text of the focus groups has been coded and categorised in relation to each participant in each of the focus groups, as well as the setting of the school (public / private) that they worked at.

4.3.2 Themes emerging from the data

4.3.2.1 Findings from focus group 1 – private schools only

The first core dimension discussed by this group is “*adaptability and flexibility*”, supported by the following quote: “There is no doubt that, as a leader, the higher your level of cultural intelligence, the more you will be flexible, adaptable, and be able to correlate and bring out the positive things among your staff”. Furthermore, it was noted that higher levels of Cultural Intelligence amongst leaders has a positive impact on staff, and it is the similarities between people from different cultures, that help with cultural adaptation.

Exploring the notion of “flexibility”, the focus group had a lengthy discussion about “*flexibility of thinking*”, which stems from the fact that it “depends on the person and personality, and that flexibility of thought is key. Being a transformational leader requires a high level of cognitive functioning, which results in the flexibility of thinking”.

Additionally, the notion of “*tolerance for other cultures*” was discussed at length, specifically in the context of the UAE as a country which accepts expatriates from various cultures,

resulting in higher levels of diversity amongst the workforce. Furthermore, **“receptivity”** towards other cultures emerged from the focus group, specifically in relation to “the UAE, which values its own culture and is open to accepting other people’s cultures”. However, this level of receptivity may be different for different types of leaders, and arguably the level of **“acceptance of”** or **“awareness towards”** other cultures is important for culture to play a role in organisations.

Learning the Arabic language has not been found to be a pre-requisite to successful adaptation in the UAE context, as participants discuss that “in the UAE people can survive and adapt without language”. This became an interesting dimension, as language is an important element of CQ. Hence, the **“non-importance of language”** for adaptability in relation to the ability to speak Arabic was another important theme that emerged from the data.

Much of the discussion was spent on **“expectations of behaviour”** from others with various specific dimensions: **“high tolerance for ambiguity”**, **“openness”**, and **“respect”**, which represent the UAE dimensions of CQ.

Hence the core themes emerging from focus group 1 are:

- **“Flexibility of Thinking”**
- **“Receptivity of Other Cultures”**
- **“Non-importance of Language”**
- **“Expectations of Behaviour”**

4.3.2.2 Findings from focus group 2 - public schools only

One of the first things discussed by the “Public School” leaders was the **“geographical location”** of the school, which has an influence on the diversity of the cohort of students and hence, the requirements for staff.

At the outset, a lot of issues were raised in relation to the schools’ governing body - ADEK - which created an **“institutional environment”** and has an influence on the leadership style

utilised within the schools. Some strong criticisms were discussed, making this a core dimension of leadership in the UAE context, specifically for public schools, where the leaders “are supposedly given an authority as leaders but they don’t really have it”.

This group also had a discussion about the diversity of leadership styles and explored the stereotypical “**flexibility**” of Western colleagues, and predominant “**rigidity**” of the Arab leaders.

Furthermore, the discussion led to an understanding that “**consistency**” in leadership is important, but so is “**flexibility**” and the ability to find a “**compromise**” with various stakeholders. To support this, it was questioned: “How do we meet in the middle to get the parents to understand that school is important? What do we need to do to get parents involved and to convince them that school is important for their children? Only through consistency in our approach”.

Being “**flexible and adaptable**” in understanding culture helps communicate to various stakeholders. As one of the participants stated: “I had to adapt as a leader, in terms of my assumptions, as to what people know and understand, and also in the way I communicate. I had to explain even things that, for me, would be obvious - such as why we have parent-teacher meetings and why the parents should attend”. Whilst another participant said: “As a leader, I now turn a blind eye to things which would have made me angry before. I’ve had to learn to let things go. Some other people cannot let it go in my organisation.”

Part of the discussion touched on the issue of language (or lack of), particularly “**communication**” with parents who may not speak English. This issue was explored through various lenses, including when this creates problems for leaders themselves when, due to language barriers, they have to sort out issues related to misunderstandings between children, parents and staff.

Looking at the core themes that emerged from the data, a lot of the discussion resonated the issues of *“flexibility”*, *“adaptability”*, and *“communication / language”*. However, a very important new core theme related to “the influence of the institutional environment” emerged that shapes leadership in public schools in the UAE. Additionally, the participants have clearly separated the notion of *“flexibility”* and *“rigidity”* in relation to different leadership styles, and added new dimensions of *“consistency”* and *“seeking compromise”* to the CQ in the UAE context.

Hence the core themes emerging from focus group 2 are:

- **“Flexibility and Adaptability”**
- **“Influence of the Institutional Environment”**
- **“Rigidity versus Flexibility in Leadership Styles”**
- **“Communication Problems”**

4.3.2.3 Findings from focus group 3 - A mix of private and public schools

The third focus group, with a mix of participants from public and private schools, raised similar concerns and discussed similar issues in relation to leadership and cultural intelligence in the UAE context. The notion of the influence of ADEK, the *“regulatory body”*, on schools - and the leaders of schools - was discussed throughout, and a lot of the discussion was centred on the fact that a *“geographical location”* creates a *“set of behaviours”* people have to follow within the country context. However, these issues could be related to how leaders act in the UAE environment, or could be related to how ADEC shapes the leadership styles of the school leaders. For instance, one participant mentioned that, “in America, I would have considered myself to be a transformational leader. In the UAE, I can be transactional at times when I know I need to get something done, but sometimes it doesn’t work. I find that I often have to be laissez-faire about many issues.” Whilst another participant stated that “as an Emirati leader in a Government school, I try to be transformational now. However, when I was a teacher for

many years, it was mainly under transactional leadership. There were many policies and rules for each single action. I am now a transformational principal and we have many different cultures and religions. As Emiratis, we have learnt to be open and we learn from each other. Particularly, I have learnt a great deal from my American Vice-Principal ...and she has learnt a lot about the UAE culture from me”.

One of the new dimensions that emerged from the discussion in this mixed focus group is the notion of “cultural delegation”, i.e. asking someone else to inform the person of the situation in advance. It can be viewed as a form of “*adaptability*”, especially if the leader does not speak the language of their subordinate. This particular strategy has become popular amongst leaders due to situations “when the staff come to the principal’s office ... [to discuss any issues] ... especially if they are from a different culture, they are immediately defensive”.

The discussion also involved talking about the notion of leaders’ “*adaptability*” and certain “*expectations of behaviour*” of the leaders themselves. The consensus was clear amongst this mixed group that “the key thing [for the leader] is to be sensitive and realise how precious ... [their subordinates’]... culture is. [Leaders have to] think about the bigger picture, and that there are many things that [they] could say that could cause problems. We have to be sensitive. There are expectations as to how you behave [and] address people.” This brings some new dimensions of “*adaptability*” to the fore, i.e. “*being sensitive*”, and “*behaving per expectations of others*”. Furthermore, the focus group concluded the discussion on the subject of leaders being able to “*accept change*”, which again links in with the notion of “*adaptability*”.

There are similarities between the themes that emerged from focus group 3, and previous focus groups. The participants explored the notion of “*flexibility and adaptability*” by exploring the role of the leader, who needs to be “*sensitive*”, able to “*accept change*”, and “*behave per expectations of others*”. However, they also brought in an issue of “*geographical location*”

and “*differences in leadership*” approaches, as well as “*learning to be a leader through cultural experiences*”.

Hence, the core themes emerging from focus group 3 are:

- “Adaptability”
- “Learning to be a leader through cultural experiences”
- “Influence of the geographical location”
- “Leader’s behaviour patterns and expectations”
- “Strategies of coping with diversity”

4.3.2.4 Testing Potential Questions

To enhance the credibility of data collection, an additional qualitative data collection technique was used through a short answers based questionnaire consisting of five key questions, which have emerged from the literature connecting Cultural Intelligence and Leadership. This set of questions (the same questions in the focus groups) was specifically pertinent for the researcher *to cross-check the individual responses of participants to these questions as compared to responses they gave in the focus group as well as to allow the research to moderate potential group dynamics influences*. All participants were given 20 minutes to answer the questions.

The responses from these individual questionnaires are summarised below in *Table 4.5*:

Table 4.5 Participant Responses matrix

		Issues Emerging from Questions				
		Q1 What Kind of Challenges does cultural diversity among stakeholders create for you as leaders?	Q2 In your experience, do leaders adapt their leadership style in the multicultural Educational Sector? Give Examples	Q3 Describe an experience where you have encountered a conflict or challenging leadership situation as a result of cultural differences among stakeholders.	Q4 Describe the actions you took in order to resolve this situation?	Q5 Think of a time when you had the same situation/experience with two culturally different stakeholders. Did you handle both situations in a similar way or did you have to change your behaviour and actions in order to resolve each situation? Give reasons for your answers.
Public School Focus Group participants	1		Compromise/ Flexibility	Importance of Communication		Flexibility Leaders rely on their personal cultural experiences
	2		Expectations and being able to deliver upon them			Requirements for Varied communication

	3	Flexibility Communication Expectations	Adapt leadership Style Show flexibility			
	4					Adaptability and Flexibility of leaders Managing Stakeholder Expectations
	5	Flexibility in decision making	Flexible and Participative Style			
Public and Private School Focus Group participants	1	Communication Negotiation Expectation of behaviour	Adaptive Leadership Flexibility	Transparency of Communication	Language and Communication	
	2		Adaptive leadership Looking for Similarities	Expectations	Understanding and Flexibility	
	3	Stakeholder Expectations	Success depends on personality, open- mindedness, skill level, education	Different cultural expectations of Parental influence	Reach a compromise solution Flexibility	
	4	Language Barriers	Possible adaptability but depends on culture, work setting and regulations.	Communication	Open Communication	Importance of understanding people's motives of behaviour
Private School Focus Group Participants	1		Leaders Adapt		Effective Communication	Flexibility
	2	Flexibility	Leaders are able to adapt		Resolve conflict through effective communication and better understanding	Clarify misunderstanding and hence achieve better communication
	3	Respect others Flexibility			Listening Respect	
	4	Language	Expectations	Regulatory body interference / stakeholder interference		Adaptability / flexibility
	5			Clarify Expectations from regulatory body		

The matrix above generated from the analysis of responses to questions echoes findings from the analysis within the focus groups audios and transcripts. Hence it is evident that the individuals who participated in the group discussion representing the views of either public or private school have reached a clear consensus regarding the core dimensions that need to be tested to further determine the level of adaptability of leadership as a result of utilising cultural intelligence.

4.3.3 Higher order themes - Setting the Questions

Having analysed the three focus groups and the questionnaire data, it transpired that a number of themes were more pertinent to the discussion than others. These resonated with the practice

of leadership, and the use of cultural intelligence by leaders in their daily dealings with diverse stakeholders.

The core themes which were uncovered as a result of the focus group are presented in *Table 4.6* below:

Table 4.6 Defining additional survey question categories

Core categories and Sub-categories exploring “Adaptability”
Expectations of Leaders Behaviour Sensitivity Ability to Adapt Behaving per other’s expectations Consistency
Personal Characteristics of Leaders Openness Respect Being Sensitive Receptive High Acceptance of Ambiguity Flexibility versus Rigidity of Character
Flexibility And Adaptability Flexibility of Thought Tolerance for other cultures Receptivity of other cultures Acceptance of other cultures Awareness of other cultures
Use of Cultural Strategies Managing stakeholder expectations Learning to be a leader through cultural experiences Shadowing Emirati leaders with Western leaders Seeking Compromise
Language / Communication Speaking Arabic Speaking English Lack of Language Skills of the leader Lack of language Skills of Stakeholders Non-importance of Language
Influence of Institutional Environment Geographical Location Differences in leadership styles required and enforced Influence of ADEK on schools Frequency and level of changes imposed by ADEK on Schools

One of the goals of the focus group sessions was to develop a scale for measuring leadership adaptability. New questionnaire items are developed to meet this need, based upon the themes identified in the focus group sessions. *Table 4.7* below lists the themes identified in the focus group sessions and the questionnaire items developed by the researcher.

Table 4.7 Mapping out the factors for each theme and the associated questions

#	Main Themes	Sub Themes	Tested Using the Following Questions
1	Expectations of Leaders Behaviour	Sensitivity, ability to adapt, behaving per other's expectations, and consistency.	LA2, LA6, and LA7
2	Personal Characteristics of Leaders	Openness, respect, sensitivity, receptive, high acceptance of ambiguity, and flexibility.	LA4, LA5, and LA10
3	Flexibility And Adaptability	Flexibility of thought, tolerance, receptivity, awareness, and acceptance of other cultures	LA1 and LA3
4	Use of Cultural Strategies	Managing stakeholder expectations, Learning to be a leader through cultural experiences, Shadowing Emirati leaders with Western leaders, and Seeking compromise	LA8, LA9 and LA12
5	Language / Communication	Lack of language skills of the leader and stakeholders, and non-importance of language	LA13
6	Influence of Institutional Environment	Geographical Location, Differences in leadership styles required and enforced, Influence of ADEK on schools, Frequency and level of changes imposed by ADEK on Schools	LA11

The Table 4.8 below shows the terminology used in the additional 13 items developed from the focus group themes. The themes and questions developed to measure them will be tested when the analysis for objective 3 is covered (see section 4.7)

Table 4.8 Additional questions to assess the impact of CQ on the ability of the school leaders to adapt their leadership style

CQ impact on the ability of the school leaders to adapt their leadership style		Strongly Disagree				Strongly Agree			
LA1	I have a high level of tolerance and acceptance toward other cultures	1	2	3	4	5	6	7	
LA2	I modify the way to influence people to achieve organizational goals depending on an individual's particular culture	1	2	3	4	5	6	7	
LA3	I adapt my approach to planning and scheduling tasks to accommodate the preferences (structured vs. flexible) of a diverse workforce	1	2	3	4	5	6	7	
LA4	I change the way I provide feedback dependant on the culture of the other person	1	2	3	4	5	6	7	
LA5	I alter my leadership style when leading a culturally-diverse workforce to maximize the impact on them	1	2	3	4	5	6	7	
LA6	I have a consistent behaviour in adapting and adjusting my leadership style when dealing with a diverse workforce	1	2	3	4	5	6	7	
LA7	I adapt my leadership style (Transformational, Transactional; Laissez Faire) based on the culture of the subordinates	1	2	3	4	5	6	7	
LA8	I adapt and flex the way I manage stakeholder relationships to best fit different cultural expectations	1	2	3	4	5	6	7	
LA9	I seek culturally different views in solving problems	1	2	3	4	5	6	7	
LA10	I am adaptable and prepared to change plans as circumstances change	1	2	3	4	5	6	7	
LA11	I adapt and flex my leadership style based on the Influence of the institutional environment such as geographic location and regulatory framework	1	2	3	4	5	6	7	
LA12	I amend my leadership style to reach a compromise solution by which all stakeholders maintained self-respect	1	2	3	4	5	6	7	
LA13	I recognise the need to continually improve my language capabilities in order to better communicate with culturally diverse/multilingual stakeholders	1	2	3	4	5	6	7	

4.3.4 Conclusion:

The focus groups identified a number of key factors that underpin the adaptability of leadership in a multicultural context. Some of these dimensions are inherent in leaders themselves (i.e. personal characteristics of leaders, language and communication ability) and behaviours which they exhibit (flexibility and adaptability, their use of cultural strategies). Other factors are more

context driven, as context imposes rules and behaviours on leaders (expectations of leader behaviour and influence of institutional environment) (Aldhaferi, 2017).

The results of the focus group support the findings of Ang and Inkpen (2008), who similarly concluded that cultural intelligence is a critical leadership competency in a multicultural environment. This was further corroborated by Deng and Gibson (2009), where it was found that cultural intelligence was a crucial competency for effective leaders in a cross-cultural role. Dagher (2010) also argues that a leader who has rapidly adjusted to a multicultural environment will be better placed to adapt their leadership style, whereas an individual who has not adapted could need to devote greater cognitive resources to adaptation, leaving fewer to focus on leadership style.

The participants in the focus groups highlighted many important issues relating to leadership adaptability in the Abu Dhabi Education sector, which were then used to develop items for the quantitative survey. Factor analysis identified that the 13 new items loaded on a single component, and are therefore taken forward for further analysis to understand whether they can and should be used as a new scale.

A paper resulting from this thesis has been published which begins to understand the concept of leadership adaptability (Aldhaferi, 2017)

The section below will discuss the quantitative (questionnaire) research in details.

4.4 Quantitative Analysis – Questionnaire

Sections 4.5 to 4.9 each covers one of the research questions, but before these are covered, in this section of the chapter the response rate, and socio-demographic characteristics of the participants are described and analysed. This begins with a breakdown of the number of responses by participant and by question, and removal of non-participants in order to arrive at a dataset with sufficient coverage. Following this is an analysis and description of the results

from the 13 socio-demographic questions and population database characteristics in order to provide evidence that the sample is representative, and not subject to demographic bias

4.4.1 Response Rate

The 82-item survey was sent to 443 people. The average time spent to complete the survey was 41 minutes and 02 seconds. However, this includes a number of outliers; one respondent took more than 51 hours to complete the survey (perhaps indicating that they left the survey open in a browser tab), and a further five outliers who required more than two hours to complete the survey. Removing these six outliers from the average time spent calculation brings the average completion time down to 20 minutes and 33 seconds (for clarity, their survey responses have not been removed, just their time taken to complete the survey has been removed from the average time calculation).

Of the 443 who received the survey, 216 did not open the link to begin the survey, leaving 227 who did (51.2%). As these 216 didn't open the link and therefore didn't answer a single question, they have been excluded from further analysis and classified as non-respondents.

Table 4.9 shows the breakdown of number of missing responses amongst the 227 who opened the link. Although 227 opened the link, 38 did not answer any questions in the survey. Of the 189 that received the questionnaire and did answer *at least* one question, almost 50% (92 from 189) completed all 82 questions, with almost 35% missing between just 1 and 5 of the 82 questions. Eight participants missed between 6 and 20 of the questions; upon inspection, for seven of these eight the missing responses were distributed randomly across all 82 questions; the final participant in this group missed all 13 of the Leadership Adaptability questions (but completed the remainder of the questionnaire). Because each of these 166 participants (92+66+8) has completed a significant proportion of the questionnaire, they are included in this chapter for further analysis.

Table 4.9 Breakdown of missing responses by participant

Number of missing responses	Participants	Removed from further analysis?
0	92	No
1-5	66	No
6-10	5	No
11-20	3	No
21-30	0	N/A
31-40	1	No
41-50	9	Yes
51-60	1	Yes
61-70	0	N/A
71-80	12	Yes
All 82	38	Yes

No participants missed between 21-30 questions. In the category 31-40 missing responses there is a single participant who missed 37 questions. On inspection, this person completed all of the questions regarding Leadership Adaptability, Cultural Intelligence and all but one of the socio-demographic questions, but missed all 36 of the MLQ questions. Because this participant has completed three of the four main sections of the questionnaire, they are included in this chapter for further analysis.

There are nine participants who missed between 41 and 50 of the questions. All nine participants missed 49 questions – all of them missing the 36 MLQ questions plus all of the 13 socio-demographic questions. A single participant missed 51 questions – one from Leadership Adaptability, one from Cultural Intelligence, all 36 MLQ and all 13 socio-demographic questions. Having missed at least two full sections of the questionnaire, these 10 participants are removed at this point and not considered for further analysis.

The remaining 12 participants missed between 71 and 80 of the 82 questions. None of these 12 participants responded beyond the Leadership Adaptability section of the questionnaire,

therefore missing the Cultural Intelligence, MLQ, and socio-demographic sections. For this reason, these participants are removed and not considered for further analysis.

After application of these criteria, the remaining participants totalled 167, giving a response rate of 37.7% (167/443). The result of setting these criteria is a good quality data set. Of the 13,694 possible data points (167 respondents, multiplied by 82 items), 13,467 are present, representing 98.34% of the total possible. The effects of missing data and requirements for deletion or inputting during analysis (Cheema, 2014; Roth, 1994), is therefore minimised.

With a finalised number of participants, the response rate *by question* can be analysed. This is necessary in order to ensure that questions are answered by a sufficient number of participants, for example to ensure that missing responses are not concentrated in a handful of questions.

Table 4.10 provides a breakdown of the number of missing responses by question.

Table 4.10 Breakdown of missing responses by question

Number of missing responses	Number of Questions	Removed from further analysis?
0	15	No
1-3	39	No
4-6	22	No
7-9	2	No
10+	4	No

All of the 82 questions were answered sufficiently by the 167 participants. Fifteen questions were answered by all 167 participants. Only four questions had 10 or more missing responses; maximum number of missing responses = 13 (7.78% missing). This analysis indicates that the missing data points were not concentrated in a small number of questions.

4.4.1.1 Conclusion

The analysis presented here provides justifiable rationale for a dataset with 167 participants and inclusion of all 82 variables.

4.4.2 Socio Demographic Characteristics

Thirteen questions were asked to ascertain the socio-demographic characteristics of the participants. There are a number of questions for which the respondent has the option to select ‘other’. In each case, responses have been cleaned to ensure they cannot be grouped with the existing response categories, and therefore are truly ‘other’. For example, the first socio-demographic item asks for the respondents’ nationality or origin; six respondents selected ‘other’ – on inspection, these six described their origin as ‘British’, ‘Indian (x2)’, ‘Jordanian (x2)’ and ‘Philippines’. Each of these six has been re-coded to the existing categories. As well as for the question regarding ‘nationality/origin’, this approach was employed for the questions regarding ‘highest level of educational attainment’, ‘school type’ (except one response, which was ‘other’ but then left blank) and ‘reasons for travel’. Socio-demographic data of all 167 participants are shown in *Table 4.11*.

Table 4.11 Socio-Demographic Characteristics of Respondents

Variable	Response Options	Frequency	Percent
Nationality/Origin	UAE National	78	46.71
	Arab	31	18.56
	African	1	0.60
	Asian	18	10.78
	Australian/New Zealander	4	2.40
	North American	18	10.78
	European	17	10.18
	Other, please specify	0	0.00
School Type	Public	92	55.09
	Private	73	43.71
	Missing	2	1.20
Age	18-25	0	0
	26-35	2	1.2
	36-45	56	33.5
	46-55	83	49.7
	56-65	24	14.4
	Over 65	2	1.2
Gender	Male	59	35.33
	Female	107	64.07

	Missing	1	0.60
Educational Attainment	High School	1	0.60
	Technical/Vocational Training	78	46.71
	College Diploma/Degree	12	7.19
	Bachelor's Degree	19	11.38
	Master's Degree	48	28.74
	PhD	8	4.79
	Other, please specify	0	0.00
	Missing	1	0.60
Leadership/Management Experience	0-2 years	0	0
	3-5 years	8	4.8
	6-10 years	36	21.6
	11-20 years	66	39.5
	Over 20 years	57	34.1
Mother Tongue	Arabic	109	65.27
	English	39	23.35
	Other, please specify	15	8.98
	Missing	4	2.40
Number of Fluent Languages	0	37	22.16
	1	80	47.90
	2	35	20.96
	3	9	5.39
	4	3	1.80
	5+	1	0.60
	Missing	2	1.20
School Type	Kindergarten (KG)	29	17.37
	Primary School	27	16.17
	Secondary School	13	7.78
	High School	26	15.57
	KG to Primary	7	4.19
	KG to Secondary	16	9.58
	KG to High School	48	28.74
	Other, please specify:	1	0.60
Staff Nationalities	Fewer than 5 nationalities	24	14.37
	5 to 10 nationalities	85	50.90
	11 to 15 nationalities	32	19.16
	16 to 20 nationalities	13	7.78
	Over 20 nationalities	10	5.99
	Missing	3	1.80
Countries Visited	1-2	13	7.8
	3-5	44	26.3
	6-10	50	29.9

	More than 10	60	35.9
Reasons for Travel	Business	59	20.27
	Tourism	158	54.30
	Study	30	10.31
	Relocate	44	15.12
	Other	0	0.00
Time Spent in Foreign Countries	None	63	37.72
	Yes, for less than a year	12	7.19
	Yes, for 1 to 2 years	12	7.19
	Yes, for 3 to 5 years	21	12.57
	Yes, for 6-10 years	17	10.18
	Yes, for more than 10 years	29	17.37
	Missing	13	7.78

It can be seen that the majority of respondents were ‘UAE nationals’ (46.7%), almost 50% of all respondents were in the ‘46-55’ age group, with a third coming from the ‘36-45’ age category; nearly two-thirds were ‘female’ (64.07%). This grouping of characteristics indicates that responses are most likely to have come from middle-aged females, of UAE descent. The respondents represented an almost balanced mix of public and private schools (55.01% and 43.71% respectively). This was representative of the total sample (443) that received the questionnaire – 257 public schools (58%) and 186 private schools (42%).

The most frequently selected educational attainment category was the ‘technical/vocational training’ category which accounted for almost 50% of respondents, indicating a low level of formal education training amongst the sample, although nearly 30% reported having a Master’s Degree. However, the sample has considerable management and leadership experience, with almost 75% selecting the ‘11-20’ and ‘over 20 years’ categories. This may indicate that respondents make up for their lack of formal qualifications by being very experienced in their roles.

Most respondents spoke Arabic as the mother tongue (65.27%), with nearly 25% having English as the mother tongue. All but two (both missing) of the 109 respondents that identified as being ‘UAE’ or ‘Arab’ nationals chose Arabic as the mother tongue. Of the 39 that identified

as being ‘European’, ‘North American’ and ‘Australian/New Zealand’ nationals, 37 chose ‘English’ as the mother tongue. Fifteen chose ‘other’ covering a range of Asian languages (Filipino x2, Hindi x3, Malayalam x3, Marathi, Punjabi x2, Tamil, Telugu, Urdu x2). Nearly 50% of respondents reported fluency in a language in addition to their mother tongue.

The most frequently chosen school type was the ‘Kindergarten to High School’ type, selected by almost 30%. The remaining 70% of responses were divided across the school types, all having between 4-17% of the responses. The respondent that selected ‘other’ left their additional details response blank. Respondents reported most typically having between 5 and 10 nationalities amongst their staff (50.9%), with almost a fifth having between 11 and 15 nationalities present at their school. More than one in five reported having more than 20 nationalities at their school.

The sample of respondents is well travelled – the most frequently chosen ‘number of countries visited’ option was ‘more than 10’, accounting for 35.9% of respondents. Nearly 30% had travelled to between 6-10 countries, and over a quarter had travelled to between 3-5 countries. Respondents were allowed to select multiple options for the reasons for their travel – the most frequently selected option was travel for ‘tourism’ with a little under 55% of responses, with travel for ‘business’ purposes being selected on 59 occasions and accounting for a little over 20% of responses. Initially, 16 respondents selected ‘other’, but upon investigation of these 16, all were re-coded to the existing categories. When asked about the length of time respondents had spent working or living in foreign countries, 37.72% reported not spending any time in foreign countries – 92% of these are UAE or Arab nationals, indicating that a handful of respondents are foreign nationals that have lived and worked their whole lives in the UAE. Just over 40% of all respondents (n=67) reported spending more than 3 years working and living in foreign countries. From these 67, five are UAE nationals, indicating respondents that have left the UAE for work or living purposes, and then returned.

4.4.3 Database Demographic Characteristics

The database of 443 schools in the UAE contains information on the characteristics of the schools from which the respondents (and non-respondents) are from. Comparisons have been made on those database characteristics between those who have responded and those who did not. Characteristics include the gender of the pupils (male/female/mixed), public / private, location (which city within UAE), school level (kindergarten, primary, etc). Making the comparisons between those who responded and did not allows for understanding of any bias from over-sampling. Full results of the comparisons are described in Appendix 12. None of the comparisons identified differences between relative proportions of respondents to non-respondents from the whole population.

4.4.4 Conclusion

In this section of the results chapter, the number of respondents was identified as being 167 from the 443 that were sent the questionnaire, resulting in a 37.7% response rate. A process for including or removing respondents that had completed some but not all of the questionnaire was described. Twenty-two participants had completed an insufficient number of questions in order to be considered for inclusion in further data analysis. 206 did not open the link to the questionnaire, and 38 opened the link but answered none of the questions. These 266 (22 + 216 + 38) are treated as non-respondents. All of the 81 questions were answered by a sufficient number of the 167 participants in order to be included in the remaining sections of this chapter. In addition, the socio-demographic characteristics of the participants, and database characteristics covering both participants and non-participants, were analysed and described to provide evidence that the data was collected from a representative sample. The sample was collected from a broad group of individuals, with representation in almost every category (see Appendix 12).

4.5 What is the level of Cultural Intelligence of School leaders in the Emirate of Abu Dhabi?

The following sections will address the five research questions identified at the outset of this chapter. Each research question is answered separately using a number of appropriate statistical techniques.

As described in the methodology chapter, the Cultural Intelligence Scale (CQS) was used in the questionnaire. The CQS is a 20-item scale, representing four ‘known’ facets of cultural intelligence – strategy, knowledge, motivation and behaviour (Ang, Van Dyne & Koh, 2006). This research question seeks to understand the level of cultural intelligence of school leaders – do school leaders have high, low or average cultural intelligence? Are some aspects of cultural intelligence, such as strategy, higher or lower than other aspects, such as behaviour? The hypotheses for this research question are:

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is not significantly different from the normative CQ level

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is significantly different from the normative CQ level

The analysis presented here seeks to answer these questions and hypotheses. This begins with a basic understanding of the responses to the scale across the sample. Dimension reduction techniques and reliability analyses are employed to ascertain whether the 20-item scale can be represented by the four known CQ factors, as has been found to be the case in previous research. The resulting dimensions are summarised in order to answer the research question and meet the requirements of the hypotheses.

For clarity, the analysis presented here is thorough in order to validate the methodology employed in this research and provide comparisons between this study and previous research

using the Cultural Intelligence scale. It must also be stated that this thorough analysis is intended to further the validation of the Cultural Intelligence scale in the UAE, and a validation of the translated instrument.

4.5.1 Descriptive Statistics

Response rate statistics for the 20 items from the CQS are shown in *Table 4.12*. A Likert response scale was used for these 20 variables, as suggested and used in the article by Ang, Van Dyne & Koh (2006), with responses on a scale from 1 (strongly disagree) to 7 (strongly agree), centred on 4 (neither agree, nor disagree).

Table 4.12 Response rate statistics for the Cultural Intelligence Scale

Item	N	Strongly Disagree				Strongly Agree			
		1	2	3	4	5	6	7	
Strategy 1	167	2	1	1	6	23	59	75	
Strategy 2	167	2	2	2	8	30	71	52	
Strategy 3	167	2	1	2	5	35	74	48	
Strategy 4	167	2	1	1	9	26	76	52	
Knowledge 1	167	2	7	14	39	53	34	18	
Knowledge 2	167	7	13	28	41	33	33	12	
Knowledge 3	165	0	5	9	25	47	53	26	
Knowledge 4	167	6	10	24	31	35	44	17	
Knowledge 5	163	4	9	24	34	37	44	11	
Knowledge 6	166	5	9	17	33	45	47	10	
Motivation 1	166	2	0	1	7	17	55	84	
Motivation 2	165	2	1	1	4	24	68	65	
Motivation 3	164	2	1	1	4	28	69	59	
Motivation 4	166	3	3	4	16	42	46	52	
Motivation 5	164	1	2	3	11	35	55	57	
Behaviour 1	167	3	2	5	6	24	71	56	
Behaviour 2	167	3	1	4	5	26	80	48	

Behaviour 3	167	2	2	3	2	29	65	64
Behaviour 4	167	4	3	3	7	32	59	59
Behaviour 5	166	3	3	3	9	29	64	55

The response rate across the 20 variables was very high, with only 18 missing responses from a possible 3,340 (0.54%). For most of the variables, the responses were skewed towards ‘strongly agree’, as can be more clearly seen in the histogram in *Figure 4.1*. The ‘frequency’ axis shows the number of times each response option was chosen, across the whole sample, for all 20 variables. Although this method of aggregating the data before displaying it can hide important details, it is useful as an initial visual description of the data.

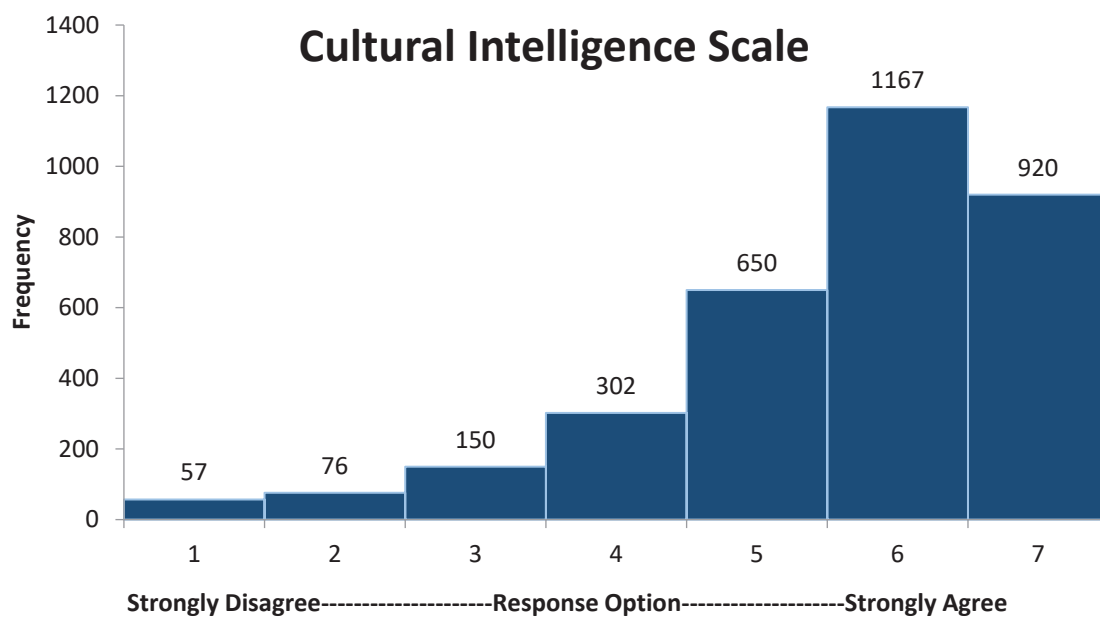


Figure 4.1 Histogram of Response Rate Statistics for Cultural Intelligence Scale

Further descriptive statistics for the CQS are shown in *Table 4.13*. The number of responses per variable are shown, again highlighting the high response rate. The next column shows the mean for each variable. Across the 20 variables, the mean scores range from 4.36 to 6.24, further indicating a skewed set of responses, and a high level of cultural intelligence amongst school leaders in Abu Dhabi. Standard error rates for the mean are low across all 20 variables, ranging from 0.081 to 0.121. The standard deviations for the 20 variables range from 1.040 to 1.566

indicating, on the whole, that responses across the 20 variables are quite narrowly distributed. For the ‘knowledge’ variables, standard deviations are, on the whole, higher than they are for the other three facets of cultural intelligence.

As anticipated given *Figure 4.1*, skewness statistics are frequently greater than +/- 1. Scores greater than +/- 1 are generally considered to indicate skewed data, with the greater the statistic, the greater the skewness. For all of the ‘strategy’, ‘motivation’, and ‘behaviour’ variables, skewness statistics are below -1, and on three occasions they are below -2. For the ‘knowledge’ variables, for which standard deviations were greater, the skewness statistics are less than -1, indicating a more ‘normal’ distribution. Additionally, the kurtosis statistics for ‘strategy’, ‘motivation’, and ‘behaviour’ variables are all above zero, and relatively high indicating a peaked, leptokurtic distribution. Read in conjunction with the skewness statistics, for these variables the kurtosis statistics indicate peaks in the tails (at the ‘strongly agree’ end of the scales), rather than the centre of the distribution. Kurtosis scores for the ‘knowledge’ variables are close to zero, all being between -0.601 and 0.042.

Table 4.13 Descriptive Statistics for the Cultural Intelligence Scale

Item	N	Mean	Std. Error of Mean	Standard Deviation	Variance	Skewness	Kurtosis
All 20 items	167	5.59	0.064	0.829	0.688	-1.531	5.484
Strategy 1	167	6.14	0.084	1.081	1.168	-2.018	6.056
Strategy 2	167	5.89	0.087	1.130	1.277	-1.711	4.387
Strategy 3	167	5.90	0.082	1.056	1.116	-1.749	5.378
Strategy 4	167	5.95	0.082	1.066	1.136	-1.796	5.318
Knowledge 1	167	4.84	0.103	1.326	1.759	-0.400	0.027
Knowledge 2	167	4.36	0.119	1.541	2.376	-0.221	-0.601
Knowledge 3	165	5.28	0.096	1.234	1.522	-0.618	0.042
Knowledge 4	167	4.67	0.121	1.566	2.451	-0.459	-0.529

Knowledge 5	163	4.64	0.114	1.452	2.109	-0.437	-0.450
Knowledge 6	166	4.72	0.111	1.426	2.035	-0.668	-0.018
Motivation 1	166	6.24	0.081	1.040	1.081	-2.168	6.972
Motivation 2	165	6.10	0.081	1.043	1.088	-2.089	6.981
Motivation 3	164	6.04	0.082	1.044	1.091	-1.971	6.519
Motivation 4	166	5.63	0.104	1.336	1.785	-1.183	1.675
Motivation 5	164	5.87	0.090	1.154	1.332	-1.262	2.174
Behaviour 1	167	5.89	0.096	1.237	1.530	-1.841	4.155
Behaviour 2	167	5.89	0.089	1.148	1.318	-1.974	5.459
Behaviour 3	167	6.02	0.087	1.124	1.264	-1.951	5.433
Behaviour 4	167	5.83	0.102	1.320	1.743	-1.738	3.577
Behaviour 5	166	5.83	0.098	1.268	1.608	-1.682	3.489

4.5.2 Dimension Reduction

Although the dimensionality of the Cultural Intelligence Scale is known from previous research (Ang, Van Dyne & Koh, 2006), to test the validity of the methodology applied in this study and to further test the dimensions of the scale, dimension reduction techniques are applied to the dataset. Dimension reduction techniques identify coherent subsets of variables that are independent of one another (Tabachnick and Fidell, 2014). The independent subsets of variables are combined into components or factors, depending upon the technique employed. Underlying relationships, which may be present in the data, are reflected in the generated factors or components.

There are various options for dimension reduction – principal components analysis (PCA), exploratory factor analysis (EFA) and Confirmatory Factor Analysis (CFA). For a robust exploration of the scale, both PCA and CFA are used. PCA provides a simple empirical summary of the data set, extracting maximum variance from the data set with each component (Tabachnick and Fidell, 2014). CFA was used by Ang, Van Dyne and Koh (2006) and so is used here to allow for comparisons to be made.

4.5.2.1 Principal Components Analysis

The oblique rotation method was chosen, as it allows for the components to be correlated with one another, whereas the alternative, orthogonal rotation, doesn't (Field, 2013). Both the 'direct oblimin' and 'promax' methods for oblique rotation were tested, although results are shown only for the direct oblimin method. Results from the promax method of rotation were almost identical to those found with the direct oblimin method. The Kaiser-Meyer-Olkin measure of sampling adequacy was .90, exceeding the accepted standard for good (.6). Bartlett's test of sphericity is significant ($p < .01$) thus rejecting the null hypothesis that the variables in the correlation matrix are uncorrelated.

Components with an eigenvalue above 1 were retained, following Kaiser's criterion. The scree plot (*Figure 4.2*) shows the point of inflexion after four components have been identified. The four components each had an eigenvalue greater than 1, and between them explain 77.2% of the variance. The fifth component had an eigenvalue of 0.657 and explained only an additional 3.28% of the variance.

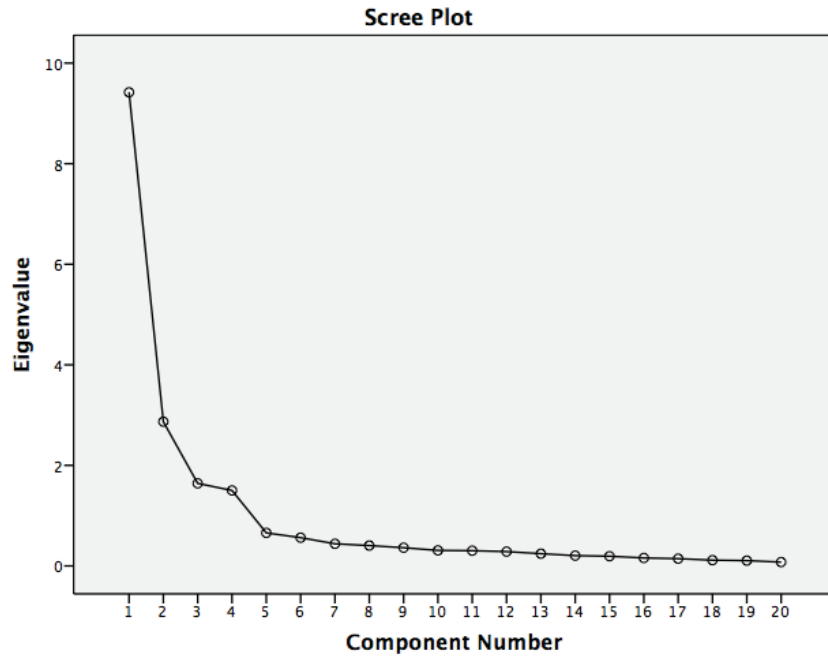


Figure 4.2 Scree plot for Cultural Intelligence Scale

The component loadings from both the pattern and structure matrices are shown in *Table 4.14* and *Table 4.15*. The highest factor loading for each variable is shown in **bold** font. Loadings that are between $-.4$ and $.4$ are in grey font.

Table 4.14 Pattern matrix for the Cultural Intelligence Scale using direct oblimin rotation

Component	Pattern Matrix			
	1	2	3	4
CQS1	-0.017	0.002	-0.919	-0.034
CQS2	0.025	-0.033	-0.929	0.074
CQS3	0.021	0.031	-0.908	-0.017
CQS4	0.002	0.063	-0.894	-0.022
CQK1	0.023	0.764	-0.069	0.099
CQK2	0.266	0.777	0.033	0.314
CQK3	-0.001	0.681	-0.222	-0.102
CQK4	-0.046	0.837	0.070	-0.164
CQK5	-0.117	0.774	-0.013	-0.292
CQK6	-0.099	0.797	-0.072	-0.171
CQM1	0.205	0.018	-0.246	-0.573
CQM2	0.122	0.026	-0.225	-0.690

CQM3	0.225	0.005	-0.137	-0.730
CQM4	0.121	0.014	0.061	-0.836
CQM5	0.036	0.206	0.007	-0.766
CQB1	0.894	-0.018	-0.004	-0.019
CQB2	0.796	0.072	-0.079	-0.074
CQB3	0.715	-0.048	-0.095	-0.226
CQB4	0.887	-0.007	0.003	-0.065
CQB5	0.914	0.000	0.022	0.015

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Rotation converged in 8 iterations.

The pattern matrix reveals that all 20 variables load highest on those components for which they are intended to measure. Additionally, there are no variables with complex loadings; all other loadings are sufficiently small to be ignored altogether. The structure matrix is more complex than the pattern matrix as it allows for relationships between variables and overlapping variance amongst factors (Tabachnick and Fidell, 2014). Although both are reported, the pattern matrix is used to inform the relationship between variables and factors (Tabachnick and Fidell, 2014).

Table 4.15 Structure matrix for the Cultural Intelligence Scale using direct oblimin rotation

Component	Structure Matrix			
	1	2	3	4
CQS1	0.443	0.328	-0.927	-0.446
CQS2	0.440	0.276	-0.896	-0.349
CQS3	0.476	0.358	-0.937	-0.447
CQS4	0.460	0.382	-0.927	-0.448
CQK1	0.193	0.766	-0.302	-0.151
CQK2	0.307	0.740	-0.224	0.013
CQK3	0.303	0.786	-0.506	-0.390

CQK4	0.175	0.847	-0.274	-0.344
CQK5	0.179	0.832	-0.359	-0.466
CQK6	0.185	0.847	-0.381	-0.385
CQM1	0.549	0.308	-0.613	-0.769
CQM2	0.503	0.323	-0.607	-0.847
CQM3	0.574	0.306	-0.580	-0.880
CQM4	0.416	0.250	-0.383	-0.858
CQM5	0.374	0.422	-0.431	-0.833
CQB1	0.899	0.194	-0.440	-0.360
CQB2	0.880	0.303	-0.525	-0.436
CQB3	0.837	0.212	-0.528	-0.531
CQB4	0.909	0.214	-0.455	-0.404
CQB5	0.897	0.198	-0.415	-0.327

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

The structure matrix shows several complex loadings for many of the variables. Despite the complex loadings, the highest loading for each variable is for the component that it is intended to measure according to previous research. Results from the promax method of rotation were almost identical to those found with the direct oblimin method (see Appendix 12).

4.5.2.2 Confirmatory Factor Analysis

A four factor model, following the structure identified by Ang, Van Dyne and Koh (2006) was created and tested. The path diagram is shown in *Figure 4.3*, and includes residual errors and correlation between factors. The maximum likelihood method was used; means and intercepts were estimated for missing data.

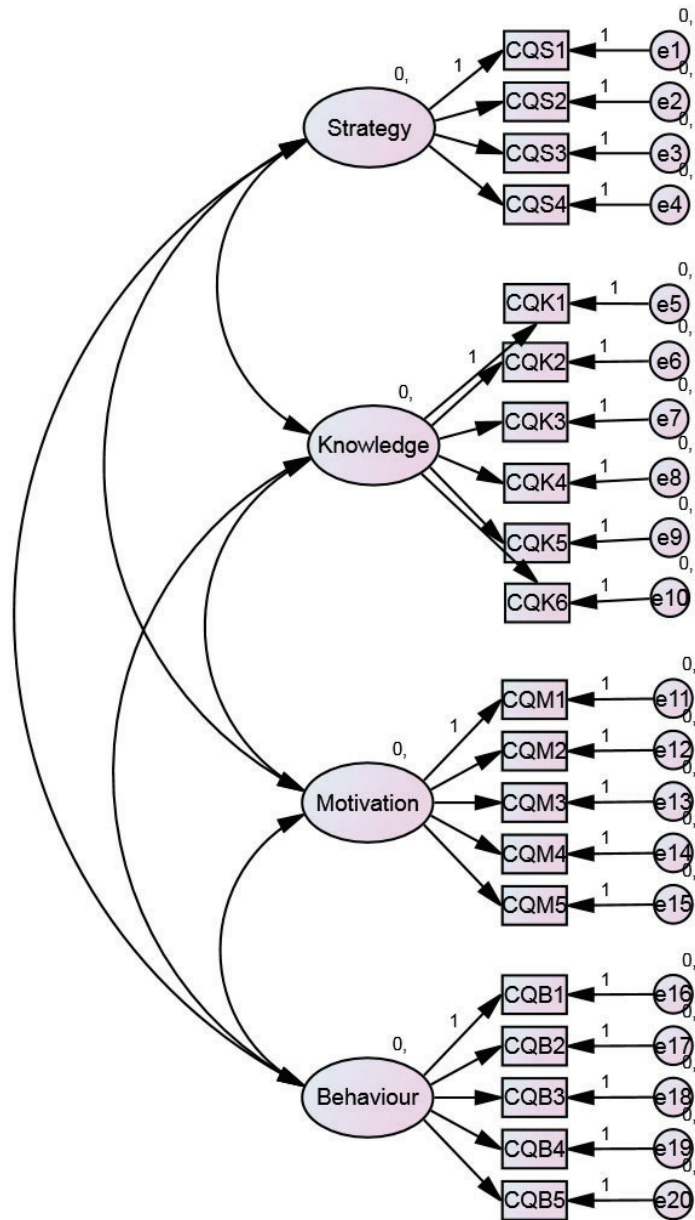


Figure 4.3 Path diagram for four factor Cultural Intelligence Scale

There are a number of outputs from the CFA to determine whether the four factor model is satisfactory. Firstly, the result of the Chi square test (χ^2) which tests whether the observed covariance matrix is different from the expected covariance matrix. A small difference, a small value of χ^2 , indicates that the observed matrix is a good ‘fit’ to the expected matrix. The value of χ^2 is therefore required to be non-significant. For the four-factor model, $\chi^2 = 354$ (df 164,

N=167), with a non-significant p -value ($p > .05$). This is almost identical to the value reported in Ang, Van Dyne and Koh (2006); $\chi^2 = 369.91$ (df 164, $N=465$); although the significance value was not reported by Ang, Van Dyne and Koh (2006).

The comparative fit index (CFI) is a measure of fit, similar to the Chi-square test, but that controls for issues of sample size. The CFI gives a result between 0-1, with higher scores indicating a greater fit. Scores above 0.9 are deemed acceptable. For the four-factor model, the CFI is acceptable at .933 but slightly lower than that reported by Ang, Van Dyne and Koh (2006), who reported CFI = .97.

A further measure, 'non-normed fit index' (or Tucker Lewis index - TLI) evaluates the discrepancy between the value of chi-squared for the hypothesized model and the value of chi-squared for the null model. Scores are between 0-1, with scores indicating a good fit above .95 and acceptable between .90 and .95. The TLI score for the four-factor model is .914, lower than that reported by Ang, Van Dyne and Koh (2006), at TLI = .96, but meeting the standard to be considered acceptable.

The final measure of fit is the 'root mean square error of approximation' (RMSEA), which evaluates the difference between the hypothesised model, with optimally chosen estimates for each parameter, and the population covariance matrix. Scores are again between 0-1, with scores of zero indicating exact fit, $<.05$ = good fit, $.05$ to $.08$ = fair fit, $.08$ to $.1$ = mediocre fit, and $>.1$ = poor fit. More generally, scores below $.08$ are accepted (Hu and Bentler, 1999). The RMSEA for the four-factor model is $.084$, slightly above the $.08$ cut off and indicating a mediocre fit. Ang, Van Dyne and Koh (2006) report a RMSEA of $.053$.

4.5.2.3 Standardised Regression Weights

In addition to indices evaluating the fit of the whole model, the relationship for each of the 20 variables to the model is evaluated. Standardised regression weights for each variable are shown in *Table 4.16*. These are equivalent and comparable to the loadings seen in the pattern

and structure matrices for the PCA. As before, the higher the values, the greater the relationship between the variable and the latent factor.

The factor loadings are, on the whole, good, providing further validation of the good results from the CFA. Five are .9 or above, 10 are between .8 and .9, three are between .7 and .8 with just two less than .7, both of which are in the ‘knowledge’ factor. Ang, Van Dyne and Koh (2006) do not report standardised regression weights to allow for comparisons.

Table 4.16 Standardised Regression Weights for Cultural Intelligence Confirmatory Factor Analysis model

Factor	Variable	Estimate
Strategy	CQS1	0.890
	CQS2	0.831
	CQS3	0.940
	CQS4	0.928
Knowledge	CQK1	0.659
	CQK2	0.592
	CQK3	0.773
	CQK4	0.827
	CQK5	0.861
	CQK6	0.855
Motivation	CQM1	0.831
	CQM2	0.911
	CQM3	0.940
	CQM4	0.733
	CQM5	0.787
Behaviour	CQB1	0.865
	CQB2	0.851
	CQB3	0.833
	CQB4	0.900
	CQB5	0.860

4.5.3 Dimensions Reliability

Four dimensions were identified during the PCA and CFA dimension reduction tests, with the 20 variables falling into the same structure as proposed by previous research (Ang, Van Dyne and Koh, 2006). To further test the resulting dimensions, tests of reliability were used to assess

consistency of participants' responses. Cronbach's alpha, α , is a measure of correlation between all possible split halves for all the 20 items. This is done for every individual, in every way possible for each dimension. The resulting value of alpha is the mean of all of the correlations. Table 4.17 shows the scores of alpha for the four dimensions of Cultural Intelligence. Scores greater than .9 are excellent, between .8 and .9 are good, and between .8 and .7 acceptable (George and Mallery, 2003). Scores for all four of the dimensions are high, with three (strategy, motivation and behaviour) being above .9 and therefore considered excellent. The remaining score, for the knowledge dimension, is just below .9.

These scores provide further justification for the 20 variables being reduced to the four dimensions identified by the PCA, CFA and previous research.

Table 4.17 Cronbach's alpha reliability scores for Cultural Intelligence scale components

Component	N	N of Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
Strategy	167	4	.943	.943
Knowledge	160	6	.891	.893
Motivation	161	5	.906	.913
Behaviour	161	5	.934	.935

(NB. Listwise deletion has reduced the number of participants in some of the dimensions)

4.5.4 Four Dimensions – descriptive statistics

The justification for treating the 20 variables as four dimensions has been made in sections 4.5.2 and 4.5.3. Descriptive statistics were displayed for the 20 variables before they were reduced to four dimensions. Descriptive statistics can again be displayed for the resulting four dimensions.

Table 4.18 Descriptive Statistics for four resulting components

Dimension	No. of Items	N	Mean	Std. Error of Mean	Standard Deviation	Variance	Skewness	Kurtosis
Strategy	4	167	5.96	0.0774	1.000	1.002	-2.156	7.572
Knowledge	6	167	4.75	0.0891	1.152	1.329	-0.359	0.056
Motivation	5	167	5.93	0.0843	1.090	1.189	-2.402	9.158
Behaviour	5	167	5.89	0.0841	1.087	1.183	-1.843	5.036

This set of descriptive statistics mirrors the set reported in *Table 4.13*, with higher mean scores, narrower standard deviations and larger skewness and kurtosis scores for the strategy, motivation and behaviour dimensions when compared to the knowledge dimension. Across the four dimensions, mean scores are high (4.75 to 5.96), indicating that the sample has high cultural intelligence. Standard deviation scores are narrow, and skewness and kurtosis scores for the strategy, motivation and behaviour dimensions are large, indicating a skewed distribution, with most of the data in the ‘strongly agree’ tail. This provides further evidence that the sample has high cultural intelligence characteristics.

Figure 4.4 shows the cultural intelligence mean scores for each of the 167 respondents (each respondent is represented by a horizontal line). This visual provides further evidence that the cultural intelligence characteristics of the sample are high – almost all of the respondents have all of their four scores above the normative data, 4.0, of the response scale. The lower scores for the knowledge dimension are also visible, with the gradient of the lines dropping from ‘strategy’ to ‘knowledge’ and then increasing again to ‘motivation’. The consistency across the four dimensions, across the sample is clear to see.

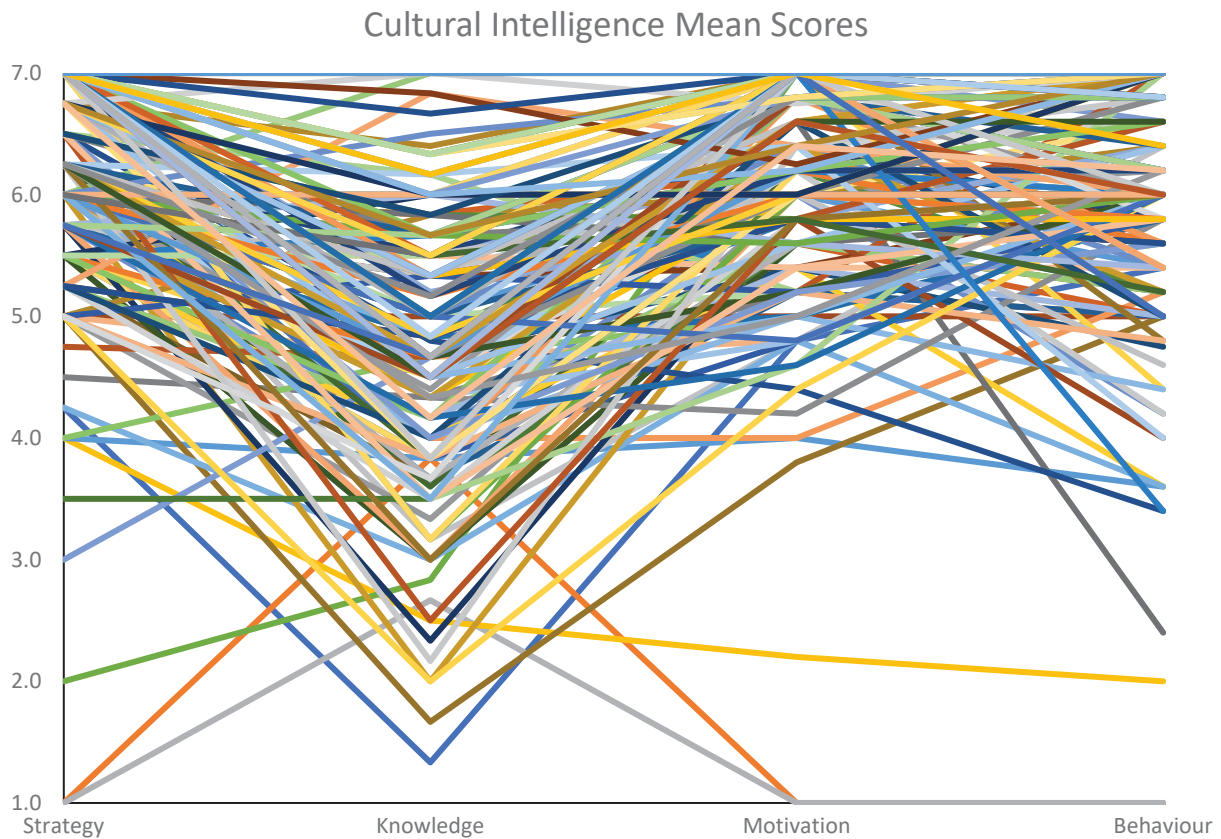


Figure 4.4 Line graph of mean Cultural Intelligence Scores for 167 participants

4.5.5 Hypothesis testing

For this research question, a null and alternative hypothesis were developed:

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is not significantly different from the normative CQ level

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is significantly different from the normative CQ level

A one-sample t-test is used to compare the mean score for the 20 variables for all participants separated into the four dimensions of CQ, with the normative datasets published in Ang, Van Dyne and Koh (2006) and Van Dyne, Ang and Koh (2008), and determine the significance of the resulting value of *t*. In the normative dataset published by Van Dyne, Ang and Koh (2008), scores from six studies are published. The results from all six, as well as the results from Ang,

Van Dyne and Koh (2006) are compared to the scores found in this study, for each of the four components of cultural intelligence.

Table 4.19 Comparisons to normative datasets - CQ Strategy

Mean Score Test Value		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Study 1 (2006)	4.89	13.92	166	.00	1.07		
Study 1 (2008)	4.71	16.25	166	.00	1.25	0.92	1.23
Study 2 (2008)	4.89	13.92	166	.00	1.07	0.92	1.23
Study 3 (2008)	4.84	14.57	166	.00	1.12	0.97	1.28
Study 4 (2008)	4.98	12.76	166	.00	0.98	0.83	1.14
Study 5 (2008)	5.11	11.08	166	.00	0.85	0.70	1.01
Study 6 (2008)	4.94	13.28	166	.00	1.02	0.87	1.18

Table 4.20 Comparisons to normative datasets - CQ Knowledge

Mean Score Test Value		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Study 1 (2006)	3.18	17.67	166	.00	1.57	1.40	1.75
Study 1 (2008)	3.03	19.36	166	.00	1.72	1.55	1.90
Study 2 (2008)	3.16	17.90	166	.00	1.59	1.42	1.77
Study 3 (2008)	3.49	14.20	166	.00	1.26	1.09	1.44
Study 4 (2008)	3.66	12.29	166	.00	1.09	0.92	1.27
Study 5 (2008)	4.14	6.91	166	.00	0.61	0.44	0.79
Study 6 (2008)	3.41	15.10	166	.00	1.34	1.17	1.52

Table 4.21 Comparisons to normative datasets - CQ Motivation

Mean Score Test Value		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Study 1 (2006)	4.74	14.15	166	.00	1.19	1.02	1.36
Study 1 (2008)	4.72	14.38	166	.00	1.21	1.04	1.38
Study 2 (2008)	4.74	14.15	166	.00	1.19	1.02	1.36
Study 3 (2008)	4.84	12.96	166	.00	1.09	0.92	1.26
Study 4 (2008)	5.34	7.04	166	.00	0.59	0.42	0.76
Study 5 (2008)	5.29	7.63	166	.00	0.64	0.47	0.81
Study 6 (2008)	5.00	11.06	166	.00	0.93	0.76	1.10

Table 4.22 Comparisons to normative datasets - CQ Behaviour

Mean Score Test Value	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	
Study 1 (2006)	4.24	19.63	166	.00	1.65	1.48	1.81
Study 1 (2008)	4.10	21.293	166	.00	1.79	1.62	1.95
Study 2 (2008)	4.22	19.867	166	.00	1.67	1.50	1.83
Study 3 (2008)	4.43	17.372	166	.00	1.46	1.29	1.62
Study 4 (2008)	4.20	20.105	166	.00	1.69	1.52	1.85
Study 5 (2008)	4.98	10.836	166	.00	0.91	0.74	1.07
Study 6 (2008)	4.21	19.986	166	.00	1.68	1.51	1.84

For all 28 comparisons between the scores found in this study and the scores published in Ang, Van Dyne and Koh (2006) and Van Dyne, Ang and Koh (2008), the values of *t* are found to be significant (df=166; N=167, $p < .001$). In all cases, the scores published by Ang, Van Dyne and Koh (2006) and Van Dyne, Ang and Koh (2008) are lower than those presented in this study, indicating that the sample of school leaders in UAE has significantly high levels of cultural intelligence.

4.5.6 Conclusion - What are the levels of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi?

This research question sought to understand the cultural intelligence characteristics of school leaders in Abu Dhabi - do school leaders have high, low or intermediate cultural intelligence? Are some aspects of cultural intelligence, such as strategy, higher or lower than other aspects, such as behaviour? The hypotheses for this research question are:

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is not significantly different from the normative CQ level

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is significantly different from the normative CQ level

Response characteristics and descriptive statistics for the 20 variables of the CQ scale gave the initial indication that cultural intelligence across the sample was high. Dimension reduction techniques, using both principal component and confirmatory factor analyses, provided excellent results allowing for the 20 variables to be analysed using the four-dimension model identified by Ang, Van Dyne and Koh (2006). The results of these analyses have proved conclusive and have partially validated the methodology used in this study. Reliability scores for the resulting four dimensions were either 'good' or 'excellent'.

The mean scores for the four components of CQ in this study ranged from 4.75 to 5.96, thus are towards the 'strongly agree' end of the 1 to 7 scale and therefore indicate 'high' cultural intelligence amongst school leaders in Abu Dhabi. The 'knowledge' dimension had the smallest mean score at 4.75, with mean scores for 'strategy' (5.96), 'motivation' (5.93) and 'behaviour' (5.89) being higher and very similar to each other.

Mean scores reported in this study are consistently higher than those reported by Ang, Van Dyne and Koh (2006) and Van Dyne, Ang and Koh (2008).

A one-sample t-test was used to compare the mean score for each of the four components of cultural intelligence with these normative datasets containing results from seven studies. The resulting 28 values of t were all deemed to be significant at the 1% level ($p < .01$).

This study replicating the earlier findings of Ang, Van Dyne and Koh (2006) and Van Dyne, Ang and Koh (2008) provides partial validation of the use of the scale in the UAE, and validation of the translation of the scale. Further validation of the CQ scale is included in the section which covers the results for RQ3 (see section 4.7.3 Discriminant Validity).

To conclude, the analysis presented for this research question indicates that school leaders in Abu Dhabi have high cultural intelligence, allowing us to reject the null hypothesis that the

mean value of Cultural Intelligence of School leaders in the Emirate of Abu Dhabi is not significantly different from the published normative values.

4.6 What is the predominant leadership style profile of school leaders in the Emirate of Abu Dhabi?

As described in the methodology chapter (see section 3.4), the Multifactor Leadership Questionnaire (MLQ5X) was used in the questionnaire. The MLQ5X is a 36-item scale, representing three main leadership style types – transformational, transactional, and laissez-faire, as well as ‘outcomes’ of leadership (Bass and Avolio, 2004). This research question seeks to understand the predominant leadership style profile of school leaders in Abu Dhabi – do school leaders exhibit a transformational, transactional or laissez-faire leadership style profile?

The hypotheses for this research question are:

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level

The analysis presented here seeks to answer this question and hypotheses. As with research Question 1, this begins with a basic understanding of the responses to the scale across the sample. Dimension reduction techniques and reliability analyses are employed to ascertain whether the 36 item scale can be represented by the known facets as found in previous research.

4.6.1 Descriptive Statistics

Response rate statistics for the 36 items from the MLQ5X are shown in *Table 4.23*. A 5-point Likert response scale was used for these 36 variables, as suggested and used in the article by Bass and Avolio (2000), with responses on a scale from 0 (not at all) to 4 (frequently, if not always), centred on 2 (sometimes).

Table 4.23 Response rate statistics for the Multifactor Leadership Questionnaire

	Dimension	Variable Number	N	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
Transformational	Idealised Attributes	MLQ10	162	8	6	17	62	69
		MLQ18	160	2	0	8	51	99
		MLQ21	163	2	2	8	52	99
		MLQ25	163	0	2	15	70	76
	Idealised Behaviour	MLQ6	163	12	13	45	64	29
		MLQ14	165	2	1	9	46	107
		MLQ23	161	3	5	14	55	84
	Inspirational Motivation	MLQ34	166	1	1	6	59	99
		MLQ9	163	0	2	8	59	94
		MLQ13	166	2	4	5	55	100
		MLQ26	161	1	2	7	71	80
	Intellectual Stimulation	MLQ36	166	0	0	8	64	94
		MLQ2	163	0	1	19	97	46
		MLQ8	166	2	3	15	65	81
		MLQ30	164	0	2	12	78	72
	Individual Consideration	MLQ32	165	2	0	10	86	67
MLQ15		165	0	2	26	72	65	
MLQ19		162	35	27	25	35	40	
MLQ29		163	3	1	14	67	78	
Transactional	Contingent Reward	MLQ31	165	0	0	5	62	98
		MLQ1	162	10	6	10	62	74
		MLQ11	163	3	4	13	77	66
		MLQ16	162	3	1	12	76	70
	Management by Exception – Active	MLQ35	164	1	0	5	53	105
		MLQ4	163	21	24	38	56	24
		MLQ22	157	28	29	35	39	26
		MLQ24	160	16	12	37	62	33
Laissez-faire	MLQ27	155	28	24	35	47	21	
	MLQ3	162	61	36	30	29	6	

Management by Exception – Passive	MLQ12	164	107	33	14	8	2
	MLQ17	157	44	39	42	26	6
	MLQ20	161	116	22	9	7	7
Laissez-Faire	MLQ5	162	96	27	19	14	6
	MLQ7	161	108	28	13	7	5
	MLQ28	163	97	31	9	15	11
	MLQ33	164	67	34	27	26	10

The response rate across the 36 variables was high, with 198 missing responses from a possible 7515 (2.63%). This is an increase from the number of missing responses for the CQ scale, possibly indicating either a level of fatigue on the part of the participants (the MLQ questions were after leadership adaptability and cultural intelligence), or differences in the question difficulty. Identifying trends in the data is difficult as the variables are worded according to the component of the MLQ they are tapping. For example, a transformational style leader would select ‘not at all’ when answering variable MLQ20 ‘I demonstrate that problems must become chronic before I take action’, but ‘frequently, if not always’ to MLQ2 ‘I re-examine critical assumptions to question whether they are appropriate’. Therefore, instead of a single histogram for all 36 variables, there are three histograms, one each for transformational, transactional, and laissez-faire.

Although only providing a basic understanding of the data, it can be seen that the most frequent response for the transformational variables is ‘frequently, if not always’, closely followed by ‘fairly often’, with very few responses for ‘not at all’ and ‘once in a while’. These frequencies are similar for the transactional variables, but with ‘fairly often’ the most frequently chosen, closely followed by ‘frequently, if not always’. Again, ‘not at all’ and ‘once in a while’ are infrequently selected. For the laissez-faire variables, the opposite is true. The response ‘not at all’ is by far the most frequently chosen, with ‘fairly often’ and ‘frequently, if not always’ infrequently selected.

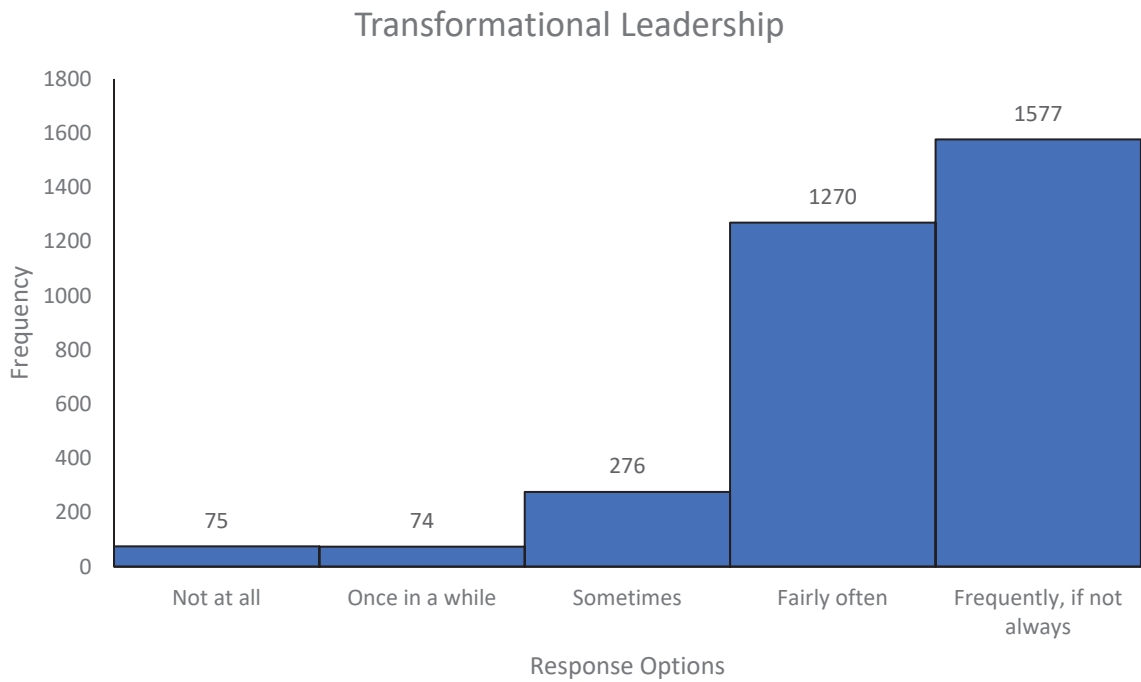


Figure 4.5 Histogram of responses to transformational leadership items

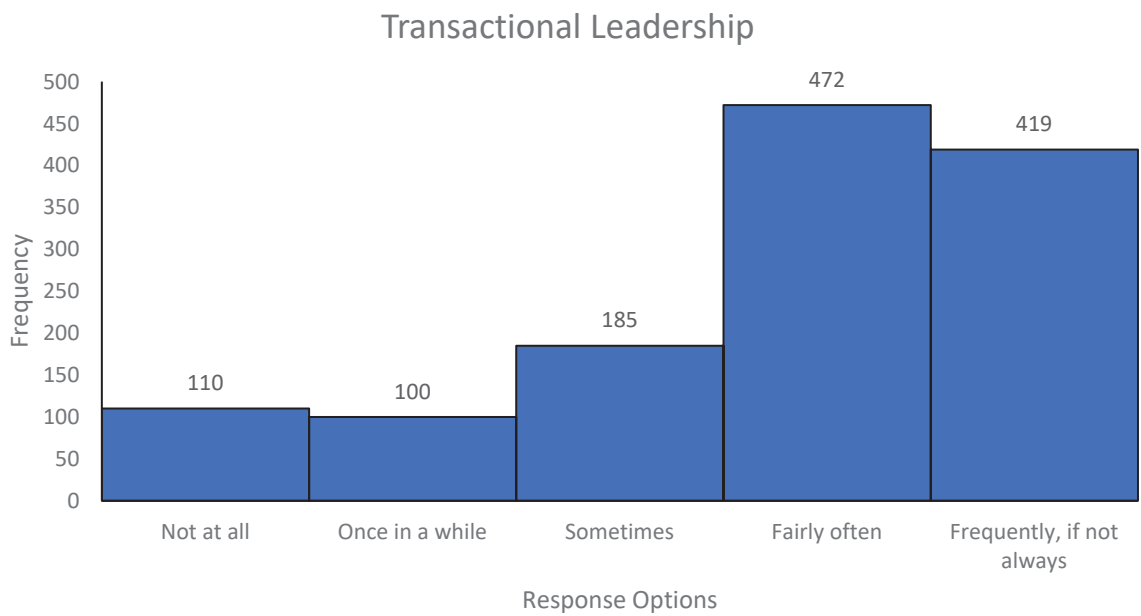


Figure 4.6 Histogram of responses to transactional leadership items

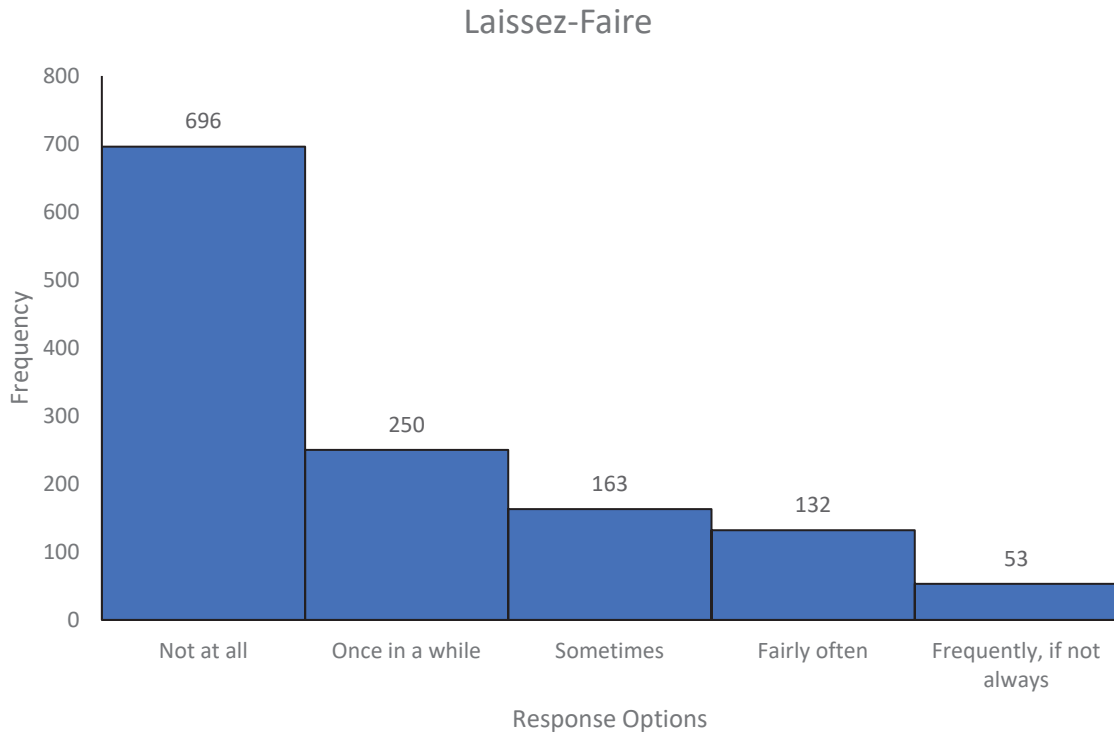


Figure 4.7 Histogram of responses to laissez-faire leadership items

The above histograms have indicated the shape of the distribution for each of the three leadership styles. The chart below shows them together, with the total number of responses divided by the number of items to make them comparable (transformational leadership has 20 items, whereas transactional and laissez-faire each only have eight items). The chart below highlights the difference between the frequency of transformational behaviours when compared with each of transactional and laissez-faire behaviours.

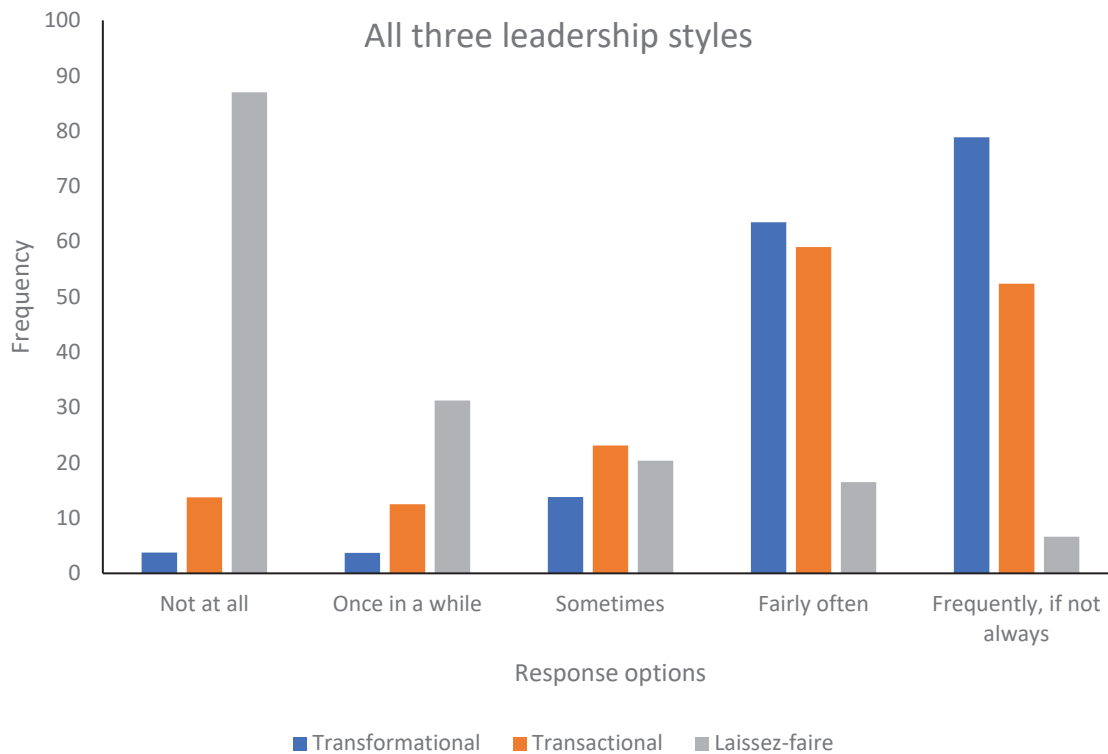


Figure 4.8 Responses for transformational, transactional and laissez-faire dimensions

Table 4.24 shows the descriptive statistics for each of the 36 MLQ variables. For the ‘transformational’ dimension, mean scores range from 2.11 to 3.56. Although this is a broad range, all but two of the 20 are above 3.0 indicating that the sample of school leaders scores consistently high on ‘transformational’ leadership style variables. For the ‘transactional’ dimensions, mean scores range from 2.04 to 3.59. However, scores range from 3.14 to 3.59 for variables in the ‘contingent reward’ dimension, whereas score range from 2.04 to 2.53 for the ‘management by exception –active’ dimension, indicating a very obvious split in the sample across these two variables. For the ‘laissez-faire’ dimensions, it can be seen that mean scores are consistently lower than they are for both ‘transformational’ and ‘transactional’ dimensions (0.59 to 1.26).

Standard deviations are consistent regardless of dimension, ranging from 0.55 to 1.49. Skewness statistics are consistently above 1 or below -1. For ‘transformational’ leadership, 12

of the 20 are outside of the acceptable -1 to +1 range, all four variables measuring ‘transactional – contingent reward’ have skewness scores below -1, and five of the 8 variables measuring ‘laissez-faire’ dimensions have skewness scores above +1.

Table 4.24 Descriptive statistics for 36 Multifactor Leadership Questionnaire variables

	Dimension	Variable Number	N	Mean	Std. Error of Mean	Standard Deviation	Variance	Skewness	Kurtosis
Transformational	Idealised Attributes	MLQ10	162	3.1	0.083	1.059	1.121	-1.408	1.689
		MLQ18	160	3.53	0.056	0.709	0.502	-2.045	6.365
		MLQ21	163	3.5	0.059	0.757	0.573	-1.98	5.279
		MLQ25	163	3.35	0.055	0.699	0.488	-0.823	0.315
	Idealised Behaviour	MLQ6	163	2.52	0.086	1.102	1.214	-0.672	-0.014
		MLQ14	165	3.55	0.057	0.736	0.542	-2.107	5.939
		MLQ23	161	3.32	0.071	0.897	0.805	-1.564	2.627
	Inspirational Motivation	MLQ34	166	3.53	0.051	0.658	0.432	-1.73	4.966
		MLQ9	163	3.5	0.051	0.651	0.424	-1.232	1.527
		MLQ13	166	3.49	0.06	0.776	0.603	-2.043	5.31
	Intellectual Stimulation	MLQ26	161	3.41	0.055	0.693	0.481	-1.437	3.734
		MLQ36	166	3.52	0.046	0.59	0.348	-0.787	-0.35
		MLQ2	163	3.15	0.05	0.634	0.402	-0.283	0.064
	Individual Consideration	MLQ8	166	3.33	0.063	0.811	0.657	-1.422	2.708
		MLQ30	164	3.34	0.052	0.669	0.447	-0.772	0.56
		MLQ32	165	3.31	0.054	0.695	0.483	-1.385	4.673
Transactional	Contingent Reward	MLQ15	165	3.21	0.058	0.747	0.558	-0.545	-0.435
		MLQ19	162	2.11	0.117	1.495	2.236	-0.136	-1.422
		MLQ29	163	3.33	0.063	0.808	0.653	-1.585	3.798
		MLQ31	165	3.56	0.043	0.555	0.308	-0.795	-0.416
Laissez-faire	Management by Exception – Active	MLQ1	162	3.14	0.086	1.101	1.211	-1.575	1.995
		MLQ11	163	3.22	0.066	0.839	0.704	-1.453	3.064
		MLQ16	162	3.29	0.062	0.786	0.617	-1.575	4.232
		MLQ35	164	3.59	0.048	0.615	0.378	-1.878	6.199
Management by Exception – Passive	MLQ4	163	2.23	0.098	1.245	1.55	-0.394	-0.841	
	MLQ22	157	2.04	0.108	1.349	1.819	-0.102	-1.175	
	MLQ24	160	2.53	0.094	1.192	1.421	-0.726	-0.218	
	MLQ27	155	2.06	0.106	1.315	1.73	-0.23	-1.102	
Laissez-faire	Management by Exception – Passive	MLQ3	162	1.28	0.098	1.242	1.543	0.5	-1.012
		MLQ12	164	0.57	0.072	0.928	0.861	1.715	2.353
		MLQ17	157	1.43	0.094	1.173	1.375	0.308	-0.915
		MLQ20	161	0.55	0.084	1.072	1.149	2.051	3.29

	MLQ5	162	0.81	0.092	1.166	1.361	1.283	0.511
Laissez-Faire	MLQ7	161	0.59	0.081	1.021	1.043	1.855	2.768
	MLQ28	163	0.85	0.099	1.27	1.612	1.373	0.582
	MLQ33	164	1.26	0.102	1.304	1.701	0.622	-0.894

4.6.2 Dimension Reduction

The dimensionality of the MLQ scale has been thoroughly tested in previous research, as is apparent in the manual by Bass and Avolio (2004). In the MLQ manual, confirmatory factor analysis was used to test eight models with between one and seven factors using data collected in 1999. Additional analyses using data collected in 2004 was used to test one, two, three and nine factor models, again using confirmatory factor analysis (Bass and Avolio, 2004).

To test the dimensionality of the scale in this research, the techniques employed in the MLQ manual to test a nine factor model are used. Also tested are a three factor model, and separate models for the transformational, transactional and laissez-faire dimensions, using CFA (see Appendix 12).

4.6.2.1 Confirmatory Factor Analysis - Nine Factor Model

The nine factor model includes the five constructs from the transformational dimension, two from transactional and two from laissez-faire. The path diagram is shown in Figure 4.9, and includes residual errors, and tests correlations between the nine factors:

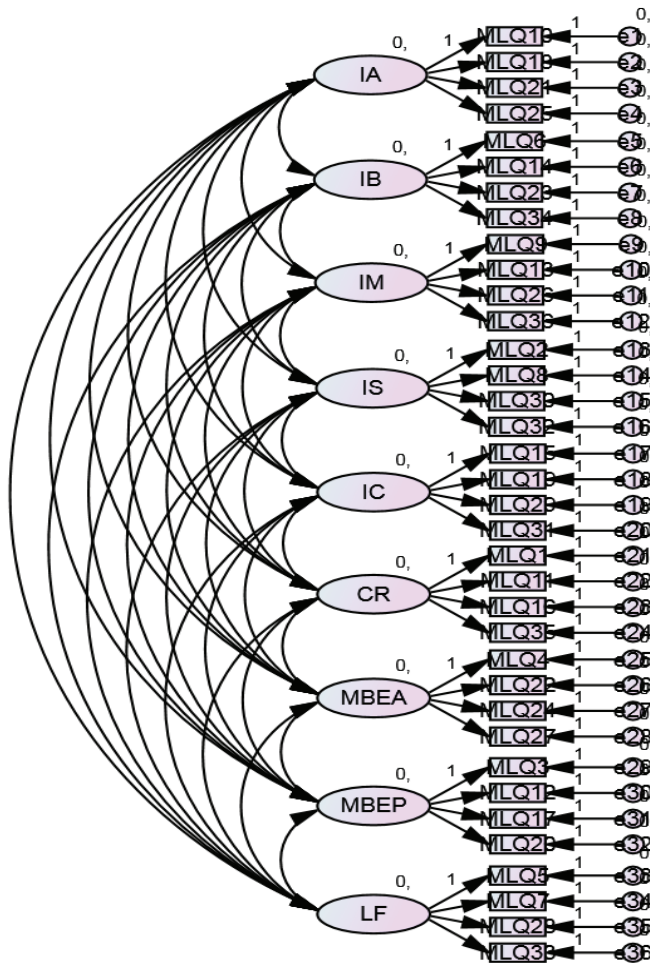


Figure 4.9 Path diagram for the nine factor MLQ model

There are a number of outputs from the CFA to determine whether this nine factor model is satisfactory (as reported for the CFA for the CQ scale). Firstly, the result of the Chi square test (χ^2) which tests whether the observed covariance matrix is different from the expected covariance matrix. A small difference, a small value of χ^2 , indicates that the observed matrix is a good 'fit' to the expected matrix. The value of χ^2 is therefore required to be non-significant. For the nine-factor model, the value of χ^2 is 1023.174 (df 558, N=167), with a significant P-value ($p > .05$). The comparative fit index (CFI) is a measure of fit, similar to the Chi-square test, but that controls for issues of sample size. The CFI gives a result between 0-1, with higher scores indicating a greater fit. Scores above .9 are deemed acceptable. For the nine-factor model, the CFI is .728. A further measure, 'non-normed fit index' (or Tucker Lewis index -

TLI) evaluates the discrepancy between the value of chi-squared for the hypothesized model and the value of chi-squared for the null model. Scores are between 0-1, with scores indicating a good fit above .95. The TLI score for the nine-factor model is .675. The final measure of fit, is the 'root mean square error of approximation' (RMSEA), which evaluates the difference between the hypothesised model, with optimally chosen estimates for each parameter, and the population covariance matrix. Scores are again between 0-1, with scores accepted below .08. The RMSEA for the nine-factor model is .071, indicating a small difference.

To conclude, only one of the measures of fit for the model provides an acceptable score (RMSEA), with the other measures of fit all being outside of the acceptable ranges, suggesting a poor model.

4.6.2.2 Standardised Regression Weights

The standardised regression weights for each variable are shown in *Table 4.25*. These are equivalent and comparable to the loadings seen in the pattern and structure matrices for the PCA used to analyse the CQ scale in section 4.5.2.1. As before, the higher the values, the greater the relationship between the variable and the latent factor.

The factor loadings are on the whole, mediocre, providing further validation of the less than satisfactory results from the CFA. Eight are highlighted in bold font as they are <0.4 . Twenty-one of the remaining 28 variables have loadings ranging from 0.5-0.7, and another five have loadings between 0.4 and 0.5. Only two have 'good' loadings, >0.8 .

Table 4.25 Factor loadings for the nine factor MLQ model

	Factor	Item	Estimate
Transformational	Idealised Attributes	MLQ10	0.224
		MLQ18	0.605
		MLQ21	0.537
		MLQ25	0.57
	Idealised Behaviour	MLQ6	0.257
		MLQ14	0.633
		MLQ23	0.356
	Inspirational Motivation	MLQ34	0.672
		MLQ9	0.579
		MLQ13	0.596
		MLQ26	0.661
	Intellectual Stimulation	MLQ36	0.802
		MLQ2	0.498
		MLQ8	0.36
	Individual Consideration	MLQ30	0.664
MLQ32		0.557	
MLQ15		0.493	
Transactional	Contingent Reward	MLQ19	0.035
		MLQ29	0.358
		MLQ31	0.516
		MLQ1	0.165
	Laissez-Faire	Management by Exception (Active)	MLQ11
MLQ16			0.491
MLQ35			0.577
Management by Exception (Passive)		MLQ4	0.512
		MLQ22	0.864
Laissez-Faire	Laissez-Faire	MLQ24	0.615
		MLQ27	0.568
		MLQ3	0.545
	Laissez-Faire	MLQ12	0.644
		MLQ17	0.232
		MLQ20	0.581
Laissez-Faire	Laissez-Faire	MLQ5	0.621
		MLQ7	0.605
		MLQ28	0.474
		MLQ33	0.557

To test the model further, the eight items that have factor loadings <0.4, which may be the cause of the unsatisfactory model results, are removed and the analysis re-run with 28 variables.

The results from the model fit indices are shown below:

- 1) Chi-squared - χ^2 (df 314, $N=167$) = 572.061, $p>.000$
- 2) CFI = .820
- 3) TLI = .767
- 4) RMSEA = .070

As with the previous model, only the RMSEA shows a satisfactory result. As might be expected, the scores have improved from the first model, but not sufficiently to accept the new 28 variable model. The process of removing items to improve the model could be continued. However, almost 20% of the 36 items, the ‘worst’ 20%, have been removed already and the improvement in the model is not significant. The regression weights have generally increased, but not significantly so (for example, MLQ25 has improved from .57 to .58).

4.6.2.3 Reliability

In the MLQ manual, reliability scores are calculated for the 36 variables using the nine factor structure. Table 4.26 shows Cronbach’s Alpha reliability scores for the nine factors:

Table 4.26 Reliability scores for the nine factor MLQ model

Dimension	N	N of Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized
Idealised Attributes (TF)	154	4	0.502	0.540
Idealised Behaviours (TF)	159	4	0.497	0.531
Inspirational Motivation (TF)	159	4	0.767	0.773
Intellectual Stimulation (TF)	160	4	0.578	0.590
Individual Consideration (TF)	158	4	0.275	0.391
Contingent Reward (TA)	154	4	0.421	0.468
Management by Exception - active (TA)	146	4	0.726	0.725
Management by Exception - passive	150	4	0.532	0.552
Laissez-Faire (LF)	156	4	0.666	0.669

The reliability scores are quite low (.391 to .773), and lower than those reported in the MLQ manual which ranged from .60 to .79 (for which only ‘self’ reports were reported; reliability

increased to .69 to .83 when other reporters were included).

4.6.2.4 Conclusion

The nine factor 36 item model was tested in this analysis using confirmatory factor analysis. The methods employed in this analysis match those presented in the MLQ manual, and went an additional step with a development of a new model after removal of variables with poor regression weights. Both the new model and original model produced unsatisfactory results and failed to meet many of the model indices minimum thresholds.

Further tests of the dimensionality of the MLQ scale are shown in Appendix 12. These are used to test a three factor model (transformational, transactional and laissez-faire latent constructs), and three separate models, one each for transformational, transactional and laissez-faire. For each of these attempts at understanding if a satisfactory model can be developed with the data collected in this study, poor results were found.

However, the MLQ5X has been used extensively in the past (Bass and Avolio, 2004) and there exists a significant precedence for using the 36 items in the nine factor model as was the intention in this study. Further testing in a UAE context is required to conclude that the MLQ5X instrument is unsatisfactory in this format. Therefore, the MLQ5X model is used in this thesis— with 36 items representing a nine factor model – with precedence given to the historical uses of the instrument in place of the results from this dimensional analysis.

4.6.3 Hypothesis testing

For this research question, a null and alternative hypothesis were developed:

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative

MLQ level

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level

Because of the extensive testing using the MLQ5X scale, a normative dataset of scores exists and is published by Bass and Avolio (2004). This allows for a comparison to be made between the school leaders in this study and the expected results based upon the normative dataset.

Table 4.27 shows the results of a comparison between the leaders in this study and the normative study, using a t-test to compare the mean scores of the two groups.

Table 4.27 Comparison between School Leaders and Normative Sample

Dimension	Average score this study	Average score normative dataset	T-test			95% Confidence Interval		
			<i>t</i>	<i>p</i>	Mean difference	df	Lower	Higher
Transformational	3.28	3.02	8.61	<.01	0.26	166	0.21	0.32
Transactional	2.78	2.28	12.28	<.01	0.50	166	0.42	0.58
Laissez-faire	0.91	0.84	1.41	0.289	0.07	164	-0.03	0.18

The differences identified allow for a rejection of the null hypothesis that the scores from this study are not significantly different from the scores from the normative dataset. For both the transformational and transactional dimensions, the scores in this study are higher, with values of *t* of 8.61 and 12.28 respectively, both found to be significant at the 1% level ($p < .01$)

4.6.4 Identifying the predominant leadership style

To further understand the characteristics of the school leaders and meet the research question, it is necessary to attempt to identify the predominant leadership style. To do this, mean scores for each of the three dimensions of leadership style are analysed.

Table 4.28 Count of mean scores for each of the three MLQ dimensions

	0-1	1-2	2-3	3-4
Transformational	0	0	32	134
Transactional	0	7	97	62
Laissez-faire	101	48	13	3

For transformational leadership, 134 (80%) of the mean scores are between 3 and 4 indicating that most of the respondents fairly often / frequently carry out transformational behaviours. The remaining 20% had mean scores between 2 and 3 indicating frequency between ‘sometimes’ and ‘fairly often’. For transactional leadership, the majority of respondents mean scores were between 2 and 3 (58%), with 37% indicating more frequent transactional behaviours with mean scores between 3 and 4. For the laissez-faire dimensions, mean scores were much lower, with 101 respondents (61%) indicating a frequency between ‘not at all’ and ‘once in a while’ and 29% having a mean score between 1 and 2 indicating a frequency between ‘once in a while’ and ‘sometimes’.

4.6.5 Conclusion - What is the predominant leadership style profile of school leaders in the Emirate of Abu Dhabi?

The intention of this research question was to understand the predominant leadership style of school leaders in Abu Dhabi. Do school leaders exhibit a transformational, transactional or laissez-faire leadership style profile? Do leaders exhibit more than one leadership style? The hypotheses for this research question are:

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ

level

The descriptive statistics of the variables indicated that the school leaders were more likely to display transformational and transactional leadership styles than they were the laissez-faire leadership style. However, during dimension reduction tests, required in order to ensure that the variables measured the nine factor model as designed by Bass and Avolio (2004), minimum thresholds for acceptance of the model were not met. Further analyses, removing variables with poor loadings, and testing new models with fewer dimensions, and new models specifically for each of the transformational, transactional and laissez-faire dimensions also did not produce satisfactory results.

However, given the extensive testing of the MLQ5X model in previous research, and this being the first use of the model in a UAE context, it was decided to treat the model as it was intended by the originating authors, and accept the pre-existing dimensions. This allowed for a comparison between scores for school leaders for the three leadership styles with a normative sample dataset. The school leaders were found to have significantly higher mean scores for transformational and transactional dimensions of the MLQ5X scale, with scores for the laissez-faire dimension rated as not significantly different, thus allowing a rejection of the null hypothesis.

Further testing was carried out to identify the predominant leadership style of the school leaders. For the transformational dimension, most of the mean scores were between 3 and 4 indicating a high frequency of transformational leadership; for transactional leadership, the majority of mean scores were between 2 and 3 indicating a lower frequency than for transformational. For laissez-faire, the majority of mean scores were very low, typically between 0 and 1. Predominantly, the school leaders in this study can be characterised as being transformational.

4.7 What is the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi?

The Leadership Adaptability scale was developed during this study and is used for the first time. The scale is comprised of 13 variables, developed as a result of the focus group sessions. The analysis presented here first explores the scale, using the same statistical techniques, such as dimension reduction and reliability, as were employed to analyse the Cultural Intelligence and MLQ scales.

There are two hypotheses for this research question:

H₀: The average level of LA for school leaders in the Emirate of Abu Dhabi is not significantly different from the LA scale midpoint of 4.0 (moderate LA)

H₁: The average level of LA for school leaders in the Emirate of Abu Dhabi is significantly different from the LA scale midpoint of 4.0 (moderate LA)

4.7.1 Descriptive Statistics

Response rate statistics for the 13 items from the Leadership Adaptability scale are shown in Table 4.29. A Likert response scale was used for these 13 variables, with responses on a scale from 1 (strongly disagree) to 7 (strongly agree), centred on 4 (neither agree, nor disagree).

Table 4.29 Response rate statistics for the Leadership Adaptability scale

Variable	N	Strongly Disagree					Strongly Agree		
		1	2	3	4	5	6	7	
LA1	166	4	0	0	1	6	48	107	
LA2	166	6	1	1	4	24	78	52	
LA3	166	3	3	2	9	28	58	63	
LA4	162	3	6	7	8	23	60	55	

LA5	165	4	3	3	5	17	66	67
LA6	166	3	0	2	2	27	73	59
LA7	166	4	7	7	10	38	59	41
LA8	165	4	2	1	10	23	75	50
LA9	166	4	1	1	8	18	70	64
LA10	165	4	0	0	4	13	59	85
LA11	165	3	2	1	9	24	68	58
LA12	166	4	0	1	3	16	68	74
LA13	166	3	4	1	8	19	43	88

The response rate for the scale was very high, with only 20 responses missing from a possible 2,171 (0.92%). As with responses for the Cultural Intelligence scale, responses are concentrated at the ‘strongly agree’ end of the scale. This can be seen more clearly in the histogram in *Figure 4.10*.

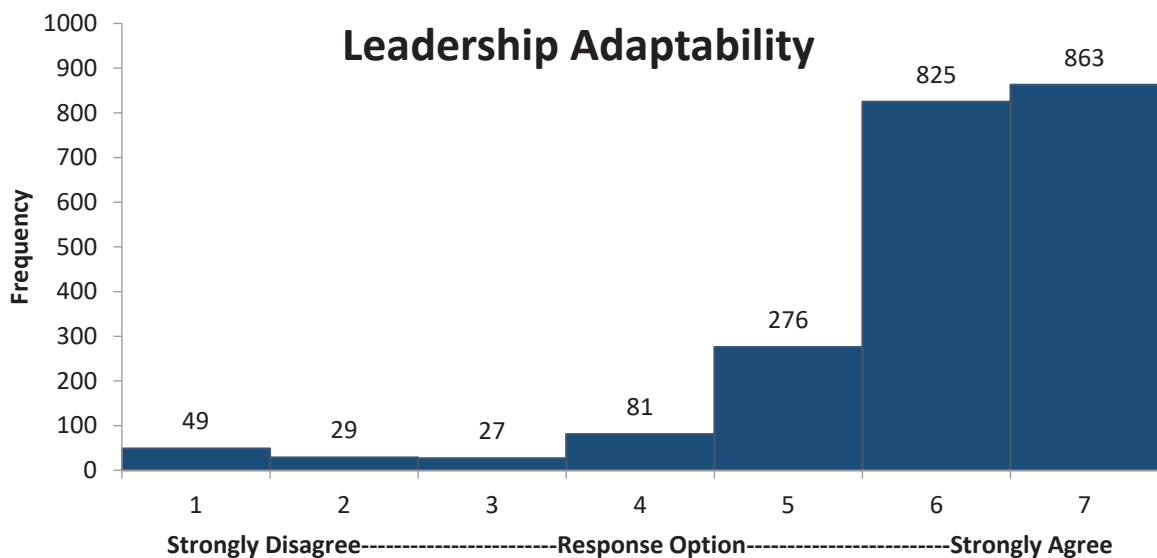


Figure 4.10 Histogram of response rate statistics for the Leadership Adaptability scale

Further descriptive statistics for the Leadership Adaptability scale are shown in *Table 4.30*. The high response rate can be seen in column two. The following column shows the mean score for each variable, with scores at the ‘strongly agree’ end of the scale, ranging from 5.48 to 6.48,

indicating a sample with high leadership adaptability. The standard error of the mean for each variable is low, with scores ranging from 0.08 to 0.11. Responses across the 13 variables are narrow in their distribution, with standard deviation scores ranging from 1.04 to 1.46. As expected given the histogram, the skewness scores are all outside of the -1 to 1 boundaries that would indicate normally distributed data. Some have skewness scores nearly as high as -4. Kurtosis scores are also outside of the acceptable range for all 13 variables, ranging from 1.4 to 16.47.

Table 4.30 Descriptive statistics for the Leadership Adaptability scale

Variable	N	Mean	Std. Error of Mean	Standard Deviation	Variance	Skewness	Kurtosis
LA1	166	6.48	0.08	1.04	1.09	-3.69	16.47
LA2	166	5.90	0.10	1.27	1.61	-2.30	6.42
LA3	166	5.90	0.10	1.27	1.62	-1.74	3.70
LA4	162	5.73	0.11	1.44	2.06	-1.50	1.90
LA5	165	5.99	0.10	1.30	1.70	-2.11	4.94
LA6	166	6.04	0.08	1.06	1.13	-2.23	7.88
LA7	166	5.48	0.11	1.46	2.12	-1.29	1.40
LA8	165	5.85	0.10	1.24	1.53	-1.96	4.93
LA9	166	6.02	0.09	1.20	1.45	-2.19	6.21
LA10	165	6.27	0.09	1.11	1.23	-2.82	10.42
LA11	165	5.94	0.09	1.19	1.42	-1.91	4.94
LA12	166	6.17	0.09	1.12	1.25	-2.65	9.46
LA13	166	6.11	0.10	1.31	1.73	-2.03	4.40

4.7.2 Dimension Reduction

As with the analysis described for the Cultural Intelligence scale, dimension reduction techniques are employed to understand whether the Leadership Adaptability scale can be represented by a smaller number of components or factors, rather than treated as 13 individual

variables. For the Leadership Adaptability scale, however, there are no known dimensions that have been identified by previous research, due to this being the first use of the scale. Therefore, the Leadership Adaptability scale will be subject to more rigorous testing than that which was applied to the Cultural Intelligence scale. The results of both principal components analysis and factor analysis are described in this section.

4.7.2.1 Principal Components Analysis

The methods for analysing the Leadership Adaptability scale follow the choices made for analysing the Cultural Intelligence scale. The oblique method for rotation, using both direct oblimin and promax types was used. The results from the promax rotation were almost identical to those generated by the direct oblimin method, and so only the results of the direct oblimin method of rotation are described here.

The Kaiser-Meyer-Olkin measure of sampling adequacy was .933, exceeding the accepted standard for good (.6). Bartlett's test of sphericity is significant ($p < .001$) thus rejecting the null hypothesis that the variables in the correlation matrix are uncorrelated.

Components with an eigenvalue above 1 were retained, following Kaiser's criterion. The scree plot (*Figure 4.11*) shows the point of inflexion after one component was identified. The single component had an eigenvalue greater than 1 and explained 64.28% of the variance. The second component had an eigenvalue of 0.882 and explained only an additional 6.78% of the variance. Due to their being just, a single component identified by the analysis, pattern and structure matrices are not generated.

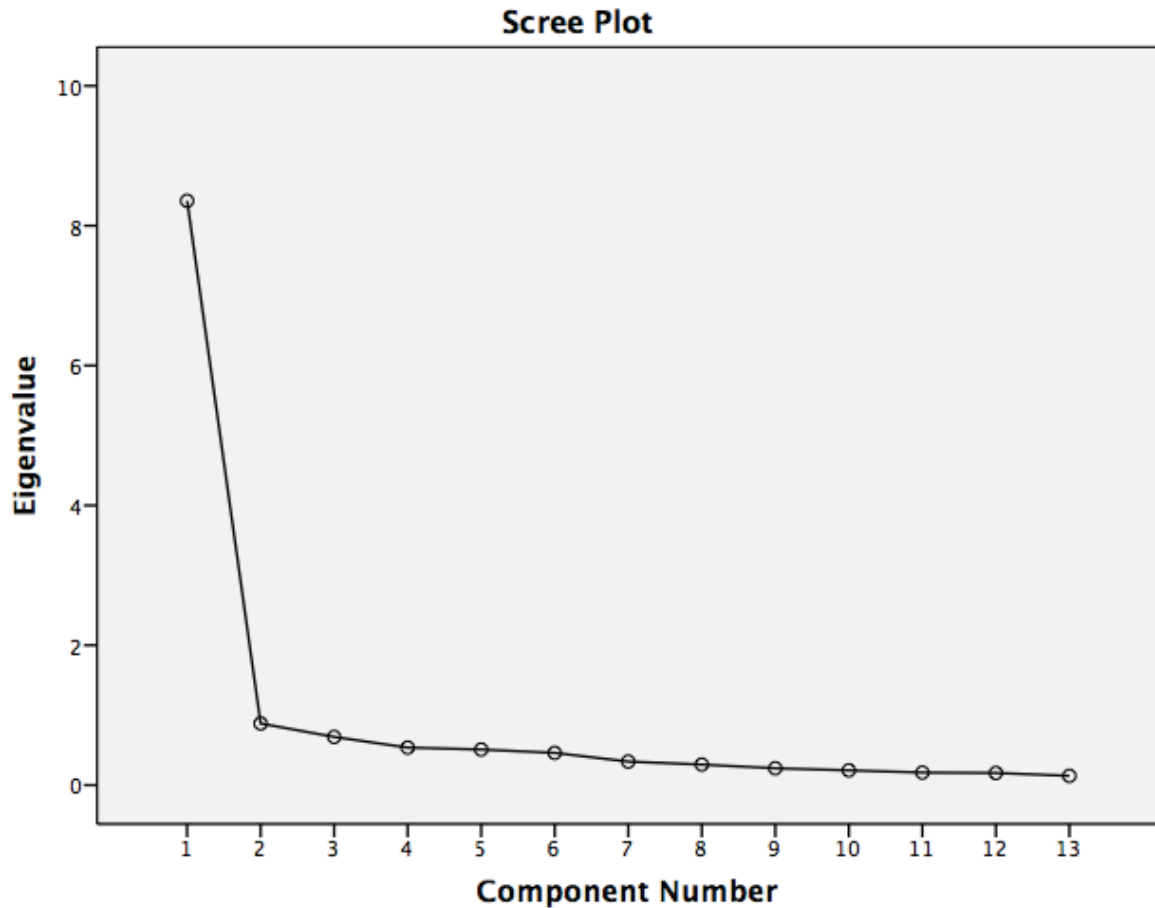


Figure 4.11 Scree Plot for Leadership Adaptability scale

4.7.2.2 Exploratory Factor Analysis

Exploratory factor analysis is different to principal components analysis as it analyses covariance rather than variance. In the computation of factors, the diagonal values in the correlation matrix are estimated based upon shared variance within pairs of variables (Tabachnick and Fidell, 2014). In the computation of components (in PCA) the diagonal values in the correlation matrix are all set to 1; hence there being more variance with PCA, but a simpler solution with factor analysis (Tabachnick and Fidell, 2014).

There are various methods for exploratory factor analysis; two of the most frequently used (Field, 2013), principal axis factoring and maximum likelihood method, are used to analyse the Leadership Adaptability scale data.

4.7.2.3 Principal Axis Factoring

The results from principal axis factoring (PAF) require the same suite of tests to be passed as were passed using PCA, for the analysis to be considered valid. Again, oblique rotation was chosen, and results from both direct oblimin and promax rotations were generated. Results from the direct oblimin and promax rotations were almost identical, and so only those for the direct oblimin rotation are described here.

The Kaiser-Meyer-Olkin measure of sampling adequacy was .936, exceeding the accepted standard for good (.6). Bartlett's test of sphericity is significant ($p < .001$) thus rejecting the null hypothesis that the variables in the correlation matrix are uncorrelated. Components with an eigenvalue above 1 were retained, following Kaiser's criterion. The scree plot (*Figure 4.12*) shows the point of inflexion after one component was identified. The first component had an eigenvalue greater than 1 and explained 65.17% of the variance. The second component had an eigenvalue of 0.886 and explained only an additional 6.81% of the variance. As with PCA, due to their being just a single component identified by the analysis, pattern and structure matrices are not generated.

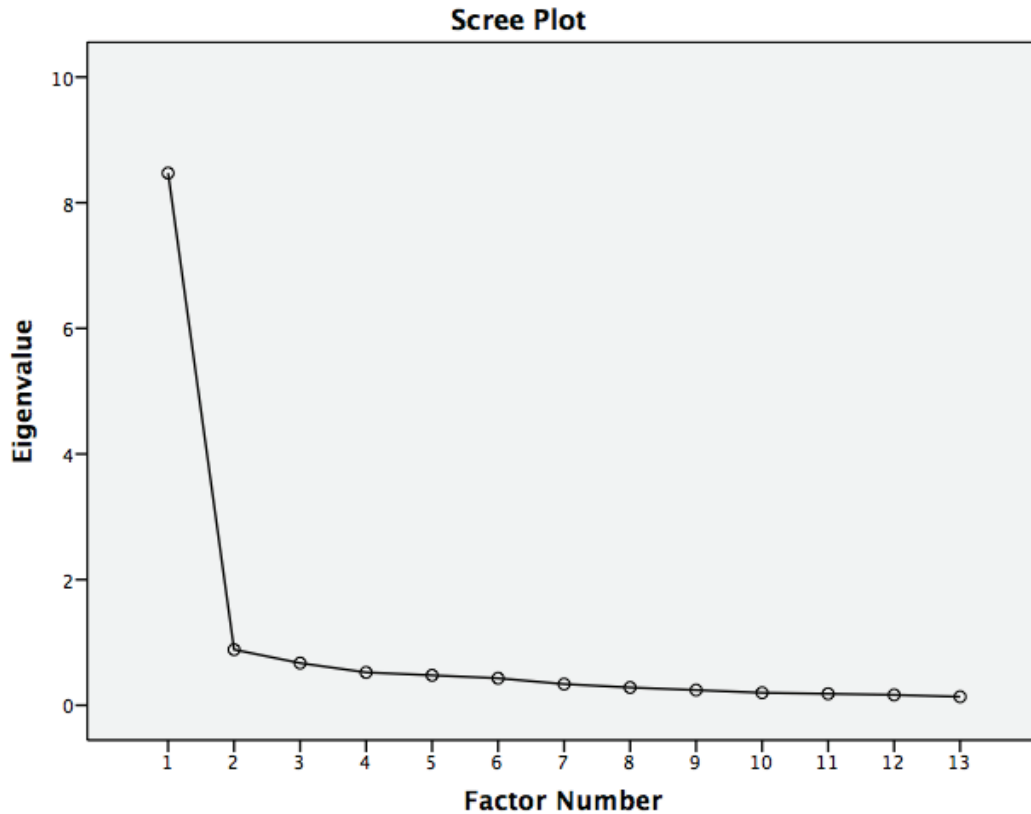


Figure 4.12 Scree plot for Leadership Adaptability scale from Principal Axis Factoring

4.7.2.4 Maximum Likelihood Method

Despite both the PCA and PFA identifying just a single factor from the 13 variables, the maximum likelihood method of factor analysis was used to analyse the data. Again, oblique rotation, with both direct oblimin and promax rotations was chosen, and again, only the direct oblimin results are shown as the promax are almost identical.

As with the PAF, the sample met the required standards for analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy was the same as it was for PAF at .936, exceeding the accepted standard for good (.6). Bartlett's test of sphericity is significant ($p < .001$) thus rejecting the null hypothesis that the variables in the correlation matrix are uncorrelated. Components with an eigenvalue above 1 were retained, following Kaiser's criterion. The scree plot (Figure 4.13) shows the point of inflexion after one component was identified, in line with the results from both PCA and PAF. The component had an eigenvalue greater than 1, and explained 65.17%

of the variance. The second component had an eigenvalue of 0.886 and explained only an additional 6.81% of the variance. As with PCA and PAF, due to their being just a single component identified by the analysis, pattern and structure matrices are not generated.

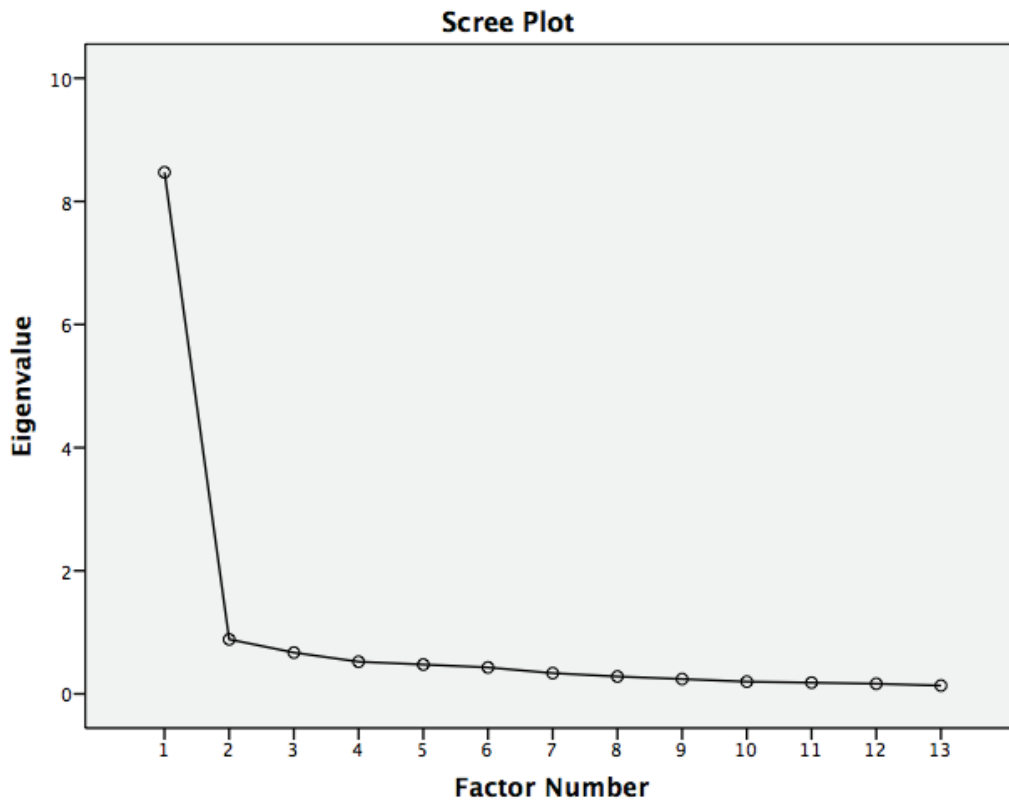


Figure 4.13 Scree plot for Leadership Adaptability from Maximum Likelihood Method

4.7.3 Discriminant Validity

To further validate the leadership adaptability scale developed in this thesis, it is used in dimension reduction tests alongside the Cultural Intelligence scale. If the leadership adaptability scale is truly a new concept, it will be able to be identified separately from the Cultural Intelligence scale during dimension reduction techniques.

4.7.3.1 Discriminant Validity – Principal Components Analysis

The methods for analysing the discriminant validity of the Leadership Adaptability scale using principal component analysis follow the choices made for analysing the Cultural Intelligence scale and Leadership Adaptability scales separately. The oblique method for rotation, using

both direct oblimin and promax types was used. The results from the promax rotation were almost identical to those generated by the direct oblimin method, and so only the results of the direct oblimin method of rotation are described here.

The Kaiser-Meyer-Olkin measure of sampling adequacy was .911, exceeding the accepted standard for good (.6). Bartlett's test of sphericity is significant ($p < .01$) thus rejecting the null hypothesis that the variables in the correlation matrix are uncorrelated.

Components with an eigenvalue above 1 were retained, following Kaiser's criterion. The scree plot (Figure 4.14) shows the point of inflexion after five components were identified. The five components had an eigenvalue greater than 1 and explained 71.19% of the variance. The sixth component had an eigenvalue of 0.968 and explained only an additional 2.93% of the variance.

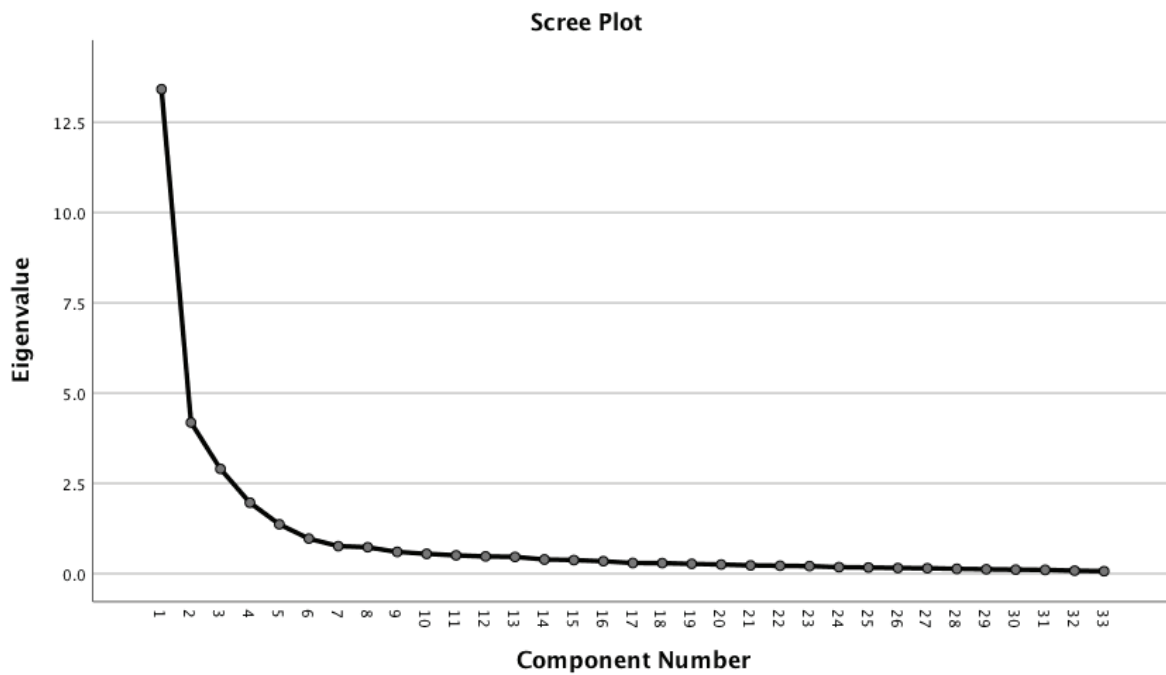


Figure 4.14 Scree plot

The component loadings from both the pattern and structure matrices are shown below. The highest factor loading for each variable is shown in **bold font**. Loadings that are between -.4 and .4 are in grey font.

Table 4.31 Pattern Matrix

	Pattern Matrix				
	1	2	3	4	5
LA1	0.718	-0.083	0.119	-0.125	-0.197
LA2	0.714	0.121	-0.263	0.151	-0.058
LA3	0.779	0.014	-0.094	0.102	0.008
LA4	0.769	0.145	-0.144	0.123	0.047
LA5	0.681	-0.014	-0.088	0.112	-0.18
LA6	0.581	-0.004	-0.083	-0.002	-0.383
LA7	0.755	0.125	-0.062	0.001	0.281
LA8	0.78	0.039	-0.079	0.037	-0.094
LA9	0.635	0.016	0.017	-0.182	-0.14
LA10	0.731	-0.109	0.151	-0.23	-0.205
LA11	0.883	-0.039	-0.021	-0.139	0.146
LA12	0.8	-0.097	0.097	-0.173	-0.109
LA13	0.66	-0.037	0.048	-0.029	-0.233
CQS1	0.2	0.087	-0.063	-0.082	-0.725
CQS2	0.112	0.05	-0.131	-0.012	-0.749
CQS3	0.096	0.139	-0.11	-0.068	-0.779
CQS4	0.033	0.163	-0.101	-0.067	-0.791
CQK1	-0.011	0.78	0.092	0.111	-0.157
CQK2	0.205	0.749	-0.084	0.178	0.141
CQK3	-0.049	0.72	-0.055	-0.105	-0.193
CQK4	-0.124	0.824	-0.044	-0.136	0.004
CQK5	0.024	0.761	0.099	-0.289	0.021
CQK6	-0.038	0.783	0.064	-0.191	-0.09
CQM1	0.04	0.031	-0.14	-0.71	-0.113
CQM2	0.154	0.033	-0.058	-0.761	-0.101
CQM3	0.02	0.033	-0.213	-0.764	-0.1
CQM4	0.012	0.053	-0.085	-0.815	0.091
CQM5	-0.007	0.204	-0.09	-0.741	0.006
CQB1	0.025	-0.036	-0.851	-0.044	-0.03
CQB2	0.153	0.074	-0.744	-0.087	-0.044
CQB3	0.078	-0.065	-0.679	-0.245	-0.053
CQB4	-0.078	-0.014	-0.905	-0.034	-0.083

CQB5	-0.033	-0.059	-0.921	-0.035	0.005
Extraction Method: Principal Component Analysis.					
Rotation Method: Oblimin with Kaiser Normalization.					

Table 4.32 Structure Matrix

	Structure Matrix				
	1	2	3	4	5
LA1	0.77	0.091	-0.217	-0.298	-0.496
LA2	0.82	0.266	-0.505	-0.155	-0.379
LA3	0.789	0.141	-0.343	-0.109	-0.3
LA4	0.8	0.266	-0.396	-0.122	-0.285
LA5	0.76	0.127	-0.337	-0.137	-0.438
LA6	0.769	0.184	-0.384	-0.304	-0.642
LA7	0.683	0.217	-0.293	-0.119	-0.068
LA8	0.846	0.199	-0.379	-0.213	-0.427
LA9	0.731	0.198	-0.314	-0.377	-0.469
LA10	0.793	0.09	-0.224	-0.391	-0.536
LA11	0.855	0.129	-0.349	-0.282	-0.267
LA12	0.831	0.091	-0.262	-0.336	-0.462
LA13	0.738	0.121	-0.25	-0.239	-0.498
CQS1	0.556	0.289	-0.352	-0.443	-0.869
CQS2	0.48	0.235	-0.361	-0.375	-0.839
CQS3	0.497	0.338	-0.377	-0.454	-0.895
CQS4	0.439	0.351	-0.352	-0.447	-0.884
CQK1	0.133	0.762	-0.044	-0.116	-0.234
CQK2	0.269	0.729	-0.199	-0.039	-0.035
CQK3	0.201	0.785	-0.251	-0.372	-0.358
CQK4	0.067	0.845	-0.196	-0.335	-0.158
CQK5	0.179	0.818	-0.145	-0.449	-0.214
CQK6	0.157	0.83	-0.153	-0.396	-0.275
CQM1	0.304	0.268	-0.436	-0.818	-0.433
CQM2	0.395	0.287	-0.411	-0.863	-0.468
CQM3	0.318	0.292	-0.517	-0.889	-0.45
CQM4	0.199	0.265	-0.363	-0.827	-0.247
CQM5	0.227	0.41	-0.383	-0.822	-0.326
CQB1	0.35	0.14	-0.876	-0.349	-0.25
CQB2	0.475	0.268	-0.854	-0.418	-0.329
CQB3	0.391	0.145	-0.794	-0.503	-0.324
CQB4	0.291	0.161	-0.905	-0.361	-0.274
CQB5	0.298	0.111	-0.91	-0.334	-0.201

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

The results from the principal components analysis confirm the discriminant validity of the leadership adaptability scale, as it is clearly defined as a separate dimension when analysed alongside the 20 CQ items. Indeed, this dimension reduction also provides evidence for the discriminant validity of the CQ scale.

Further examinations of the discriminant validity of the leadership adaptability scales were analysed using both types of exploratory factor analysis used previously in this chapter (maximum likelihood and principal axis factoring). In all analyses, the leadership adaptability scale was found to be separate from the CQ scale, and on no occasions was an item from the CQ scale found to be identified amongst the leadership adaptability dimensions, or a leadership adaptability item found to be outside of the leadership adaptability dimension.

Results of these analyses can be found in Appendix 12.

4.7.4 Conclusion – Dimension Reduction

Three different analyses of the Leadership Adaptability scale data, using three different methods, have each revealed a single dimension containing all 13 of the Leadership Adaptability variables. For each analysis, all of the minimum thresholds that are required for accepting the dimension reduction technique results are met, thus allowing for the scale to be treated as a single dimension. Discriminant validity tests identified the leadership adaptability scale as being separate from CQ.

4.7.5 Reliability

In the same way that Cultural Intelligence dimensions resulting from PCA were tested for reliability, the same analyses can be carried out on the single resulting dimension from the Leadership Adaptability scale.

Table 4.33 shows the results from the reliability analysis for the single Leadership Adaptability dimension. The score of Cronbach's α is excellent, at above .9, indicating that the dimension identified is reliable. However, it should be noted that the score for Cronbach's α increases as the number of variables increases, and should not be used when the number of variables is above 14 (Cortina, 1993). For this analysis, there are 13 variables - and therefore the recommendation is not violated - but it could be that the high Cronbach's α score is partially due to the large number of variables. SPSS uses listwise deletion for the reliability test, which has removed 9 respondents (those that missed the 20 responses noted in 4.7.1).

Table 4.33 Reliability analysis for the Leadership Adaptability scale

N	N of Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
158	13	0.953	0.955

4.7.6 Single dimension – descriptive statistics

Table 4.34 shows the descriptive statistics for the single resulting dimension identified. When analysed as 13 separate variables, mean scores were high, standard deviations were narrow, and skewness and kurtosis scores were outside of the acceptable boundaries for normally distributed data. The same can be said for the resulting single dimension – the mean score is almost six, on a seven-point scale and the standard deviation is narrow at just over one. The skewness is large at below -3, and the kurtosis is also large at over 12.

Table 4.34 Descriptive statistics for the single Leadership Adaptability dimension

Dimension	No. of Items	N	Mean	Std. Error of Mean	Standard Deviation	Variance	Skewness	Kurtosis
Leadership Adaptability	13	167	5.95	0.0837	1.082	1.172	-3.037	12.101

4.7.7 Hypothesis testing

For this research question, a null and alternative hypothesis were developed:

H₀: The average level of LA for school leaders in the Emirate of Abu Dhabi is not significantly different from the LA scale midpoint of 4.0 (moderate LA)

H₁: The average level of LA for school leaders in the Emirate of Abu Dhabi is significantly different from the LA scale midpoint of 4.0 (moderate LA)

Table 4.30 showed the mean score for each of the 13 variables, with values ranging from 5.48 to 6.48. All mean values are well above the mid-point of the scale, 4.0, and close to the top of the scale (as shown in the histogram in figure 4.10) and so the null hypothesis of scores equal to the midpoint of the scale is likely to be rejected.

A one-sample t-test is used to compare the mean score for all 13 variables for all participants, with the mid-point of the scale, and determine the significance of the resulting value of *t* (Table 4.35).

Table 4.35 One-sample t-test to compare the mean score for leadership adaptability with the mid-point of the scale, 4.0

N	Mean	Std. Deviation	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
							Lower	Upper
167	5.95	1.082	23.35	166	0	1.95	1.79	2.12

For all 167 participants, their mean scores for the 13 variables had a mean of 5.95. A value of t of 23.35 ($df=166$, $N=167$) was found, the probability of which was found to be significant at the 1% level ($p<.01$). The null hypothesis, that the scores are equal to the midpoint of the scale, is rejected.

4.7.8 Conclusion – What is the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi?

The analysis presented here has sought to understand the Leadership Adaptability scale, which was developed as part of this thesis, and to use it to characterise the school leaders. Two hypotheses were developed:

H₀: The average level of LA for school leaders in the Emirate of Abu Dhabi is not significantly different from the LA scale midpoint of 4.0 (moderate LA)

H₁: The average level of LA for school leaders in the Emirate of Abu Dhabi is significantly different from the LA scale midpoint of 4.0 (moderate LA)

Due to this being a new scale, a robust analysis was required to understand the underlying dimensions in the variables. Three types of dimension reduction techniques were employed, each of which gave the same conclusion – that the 13 variables are measuring a single dimension. Discriminant validity tests identified the leadership adaptability scale as being separate from CQ. Reliability analyses confirmed the results of the dimension reduction results, with an excellent score for Cronbach's Alpha of 0.953. Descriptive statistics for the 13 variables treated separately and as a single dimension revealed a sample with high leadership adaptability characteristics. The mean scores for the 13 variables ranged from 5.48 to 6.48; for the scale as a single dimension, the mean score was 5.95. A one-sample t -test compared this mean score with the mid-point of the scale, resulting in a t value that was determined to be

statistically significant at the 1% level. The null hypothesis, that school leaders' mean leadership adaptability is equal to the midpoint of the scale, is rejected.

To conclude, the analysis presented for this research question indicates that school leaders in Abu Dhabi have a high Leadership Adaptability score significantly higher than the midpoint of the response scale, thus allowing a rejection of the null hypothesis.

4.8 Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style?

This research question is the first that seeks to bring together two parts of the questionnaire data – MLQ5X and Cultural Intelligence – with the aim to provide a deeper understanding of the characteristics of the leaders. The analysis here seeks to understand whether there are groups of participants that share similar characteristics, and if so, what are the differences between the groups. There is a null and alternative hypothesis for this research question:

H₀: There is no relationship between Leadership Style and Cultural Intelligence

H₁: There is a significant relationship between Leadership Style and Cultural Intelligence

The analysis uses participants' average scores for the CQ and MLQ scales, and seeks to understand correlations between them. Correlations are used to determine the strength and direction of the relationship between the characteristics – for example, does cultural intelligence increase as transformational leadership style increases? As cultural intelligence decreases, do leaders become more laissez-faire?

4.8.1 Pearson's Correlation Coefficient

The Pearson correlation coefficient is used to understand the relationship between the CQ scale and the MLQ scale. Two sets of correlations are computed; firstly, correlations between

the average of all 20 CQ variables with each of the three dimensions of MLQ; and secondly, correlations between each of the four dimensions of cultural intelligence and the three MLQ dimensions.

Reported are both the correlation coefficients and the significance of the correlations. A 5% significance level is chosen and a Bonferroni correction is applied, to limit the possibility of false positives. Table 4.36 shows the results of the Pearson correlation between all 20 CQ variables and the three MLQ dimensions.

Table 4.36: Pearson correlation coefficient for all CQ variables and the three MLQ dimensions

	Average Cultural Intelligence	<i>p</i> -value
Average Transformational Leadership	0.25	<.001
Average Transactional Leadership	0.095	NS
Average Laissez-faire Leadership	-0.011	NS

The correlation coefficient between all 20 CQ variables and the transformational dimension of the MLQ scale was found to be 0.25, significant at the 1% level ($p < .01$). Neither of the other two correlations were found to be significant.

As noted, the correlations are repeated, but for this analysis the CQ scale is represented as four dimensions and correlated with the three dimensions of the MLQ scale. Again a Bonferroni correction is applied. Table 4.37 shows the results of the Pearson correlation with significance values for each correlation also identified.

Table 4.37: Pearson correlation coefficient for four dimensions of cultural intelligence and three dimensions of MLQ ($p < .05$, ** $p < .01$, *** $p < .001$).*

	Average CQ Strategy	Average CQ Knowledge	Average CQ Motivation	Average CQ Behaviour
Average Transformational	0.224**	0.093	0.225**	0.286***
Average Transactional	0.111	0.104	0.037	0.135

Average Laissez-faire	0.004	0.131	-0.038	-0.088
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A number of the correlations were found to be significant, all of which relate to the transformational leadership style. Firstly, with the ‘strategy’ element of cultural intelligence ($r = 0.224$; $p < .01$), secondly with the ‘motivation’ component of cultural intelligence ($r = 0.225$; $p < .01$), and finally the ‘behaviour’ component of cultural intelligence ($r = .286$; $p < .01$).

4.8.2 Influence of School Type

To further understand the relationship between cultural intelligence and leadership style, a demographic characteristic, school type, was used in further correlation calculations. The intention was to assess whether school type moderated the relationship between cultural intelligence and leadership style. To do this, Pearson correlation coefficients were computed separately for respondents from public schools and private schools, and the two resulting values of r (one for each relationship) were converted to a single z -score using the Fisher r -to- z transformation. The significance of each resulting z -score, assessing the significance of the difference between two correlation coefficients, is determined. Significant values of z therefore highlight a significant difference between the two Pearson correlation coefficients calculated for the relationships, and suggest that school type moderates the relationship between cultural intelligence and leadership style.

The table below shows the z -scores, and the resulting level of significance (p -value) for each z -score. As noted, a single z -score is calculated per comparison of two correlation coefficients. For example, the z -score from converting Pearson correlation coefficients for Total CQ and Transformation leadership is 0.09, which is found to be non-significant ($p > .05$). The values of the Pearson correlation coefficients for each relationship can be found in Appendix 12, and in the example quoted here are r (public) = .284, r (private) = .270.

Table 4.38 Correlation between CQ and Leadership Style

Fisher r-to-z		Total CQ	CQ Strategy	CQ Knowledge	CQ Motivation	CQ Behaviour
Transformational	z-score	0.09	-0.12	0.72	0.98	0.22
	p-value	.92	.90	.47	.33	.83
Transactional	z-score	2.14	1.65	1.6	2.58	1.71
	p-value	.03	.10	.10	0	.09
Laissez-faire	z-score	1.28	1.01	0.3	-0.49	1.28
	p-value	.20	.31	.76	.62	.20

After application of a Bonferroni correction, a single comparison was determined to be significant (CQ Motivation and Transactional leadership). Given this result, a single significant relationship in 15 comparisons, it was concluded that school type does not moderate the relationship between cultural intelligence and leadership style.

4.8.3 Conclusion

The analysis presented here sought to understand whether there are relationships between participants' level of cultural intelligence and their leadership style.

There are two hypotheses for this research question:

H₀: There is no relationship between Leadership Style and Cultural Intelligence

H₁: There is a significant relationship between Leadership Style and Cultural Intelligence

The analysis found that the whole CQ scale had a significant relationship with the transformational component of MLQ, and a further set of comparisons found that the strategy, motivation and behaviour components of cultural intelligence were significantly related to transformational leadership.

None of the correlations involving transactional leadership style or laissez-faire leadership style were found to be significant. Also, the correlations involving the knowledge component

of cultural intelligence was found not to be significantly related to any of the three leadership styles. The presence of significant relationships between MLQ and CQ allows for a rejection of the null hypothesis that there is no significant relationships. School type was found not to moderate this relationship.

To conclude, the analysis presented for this research question indicates that there is a significant relationship between cultural intelligence and transformational leadership style, and further between the strategy, motivation and behaviour components of cultural intelligence and transformational leadership, thus allowing a rejection of the null hypothesis.

4.9 Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence?

This is the second research question that brings together two parts of the questionnaire data; for this research question, Is Cultural Intelligence is related to Leadership Adaptability. There are two hypotheses for this research question:

H₀: There is no relationship between Cultural Intelligence and Leadership Adaptability

H₁: There is a significant relationship between Cultural Intelligence and Leadership Adaptability

In the first research question, the CQ scale was identified as having four distinct dimensions, as intended by the developers of the scale. In the third research question, the leadership adaptability scale was identified as being a single dimension understood by measuring 13 variables. The analysis uses participants' average scores for the CQ and leadership adaptability scales, and seeks to understand correlations between them. Correlations are used to determine the strength and direction of the relationship between the characteristics – for example, does

leadership adaptability increase as cultural intelligence increases? Are there elements of cultural intelligence which are not as well related to leadership adaptability than others?

4.9.1 Pearson's Correlation Coefficient

The Pearson correlation coefficient is used to understand the relationship between the CQ scale and the leadership adaptability scale. Two sets of correlations are computed but are reported together; correlations between the average of all 20 CQ variables with the leadership adaptability, and correlations between each of the four dimensions of cultural intelligence and leadership adaptability.

As with the approach for the previous research question, reported are both the correlation coefficients and the significance of the correlations. A 5% significance level is chosen and a Bonferroni correction is applied, to limit the possibility of false positives. *Table 4.38* shows the results of the Pearson correlations.

Table 4.39: Pearson correlation coefficient for leadership adaptability with all CQ variables and with each of the four dimensions of CQ

	Average Leadership Adaptability	<i>p</i> -value
Average All 20 CQ items	0.501	<.001
Average CQ Strategy	0.567	<.001
Average CQ Knowledge	0.247	<.001
Average CQ Motivation	0.381	<.001
Average CQ Behaviour	0.463	<.001

The correlation coefficient between all 20 CQ variables and the leadership adaptability scale was found to be 0.501, significant at the 1% level ($p < .01$). Further, each of the four dimensions of cultural intelligence were also found to be significant at the 1% level ($p < .01$), with positive values of r ranging from 0.247 to 0.567, indicating strong positive relationships between the four dimensions of CQ and leadership adaptability.

4.9.2 Influence of School Type

Following the analysis presented for section 4.8, the relationship between leadership adaptability and cultural intelligence is further tested to understand whether school type acts as a moderator in this relationship. As with the analysis presented for section 4.8, Pearson correlation coefficients are calculated for each relationship separately for respondents from each school type and the Fisher r-to-z transformation is applied to calculate a z-score, the significance of which is then determined.

The table below shows the z-score for each comparison. A single comparison is found to be significant after the application of the Bonferroni correction, between CQ Behaviour and leadership adaptability. With just a single significant comparison, it is concluded that school type does not moderate the relationship between leadership adaptability and cultural intelligence.

Table 4.40 Correlation between CQ and Leadership Adaptability

Fisher r to z		Total CQ	CQ Strategy	CQ Knowledge	CQ Motivation	CQ Behaviour
Leadership	z-score	2.42	0.25	1.27	2.34	3.25
Adaptability	p-value	.02	.80	.20	.02	0

4.9.3 Conclusion

The analyses presented in this section sought to test whether Cultural Intelligence was related to Leadership Adaptability. Two hypotheses were developed for this research question:

H₀: There is no relationship between Cultural Intelligence and Leadership Adaptability

H₁: There is a significant relationship between Cultural Intelligence and Leadership Adaptability

The analysis found that the 20 item CQ scale had a significant relationship with leadership adaptability, and a further set of comparisons found that the strategy, knowledge, motivation

and behaviour components of cultural intelligence were significantly related to leadership adaptability. School type was found not to moderate this relationship.

To conclude, the analysis presented for this research question indicates that there is a significant relationship between cultural intelligence and leadership adaptability, and further between the strategy, knowledge, motivation, and behaviour components of cultural intelligence and transformational leadership, thus allowing a rejection of the null hypothesis.

4.10 Conclusion

This chapter was divided into six main sections – an initial section covering response rates and socio-demographic characteristics of the respondents, followed by five sections each covering a separate research question. The results of the qualitative study were also covered.

A response rate of 37.7% was achieved, resulting in a dataset with 167 participants. All of the 82 variables in the questionnaire were answered by sufficient participants to be included in the analysis. The socio-demographic variables revealed a diverse sample, with a good coverage of nationalities, gender, age groups and good representation from both public and private schools.

The first research question sought to understand the cultural intelligence characteristics of the school leaders. The analysis showed that mean scores for Cultural Intelligence were high, ranging from 4.75 to 5.96. The dimension with the lowest mean score was ‘knowledge’ (Mean 4.75), whereas the other dimensions - strategy, motivation, and behaviour - all had high mean scores, all being just below six on a seven-point scale. Mean scores were compared to seven studies showing normative values for each of the four components of CQ; all 28 comparisons were found to be significant at the 1% level, and in all cases the scores from this study were found to be higher, thus allowing a rejection of the null hypothesis.

The second research question sought to understand the predominant leadership style of the school leaders. Dimension reduction techniques failed to identify suitable coherent subsets of variables. Accepting previous research for dimension reduction allowed for the sample to be compared with a normative sample. The school leaders were found to have significantly higher scores for the transformational and transactional dimensions, but not laissez-faire, thus allowing a rejection of the null hypothesis. The predominant leadership style was identified as being transformational.

The third research question sought to understand the Leadership Adaptability characteristics of school leaders. The leadership adaptability scale was found to be represented by a single dimension of 13 variables, with participants having high leadership adaptability, the mean score being 5.95, thus allowing a rejection of the null hypothesis.

The fourth research question sought to bring together Cultural Intelligence and Leadership Style. A significant relationship was found between the transformational dimension of leadership style and all CQ, and three of the four dimensions of CQ (excluding 'knowledge'), thus allowing a rejection of the null hypothesis.

The final research question brought together Cultural Intelligence and Leadership Adaptability. Again, significant positive relationships were identified through correlations, with all 20 CQ items, and all four components of CQ having significant relationships with leadership adaptability, thus allowing a rejection of the null hypothesis.

Table 4.39 shows a summary of the objectives, research questions, hypotheses and outcomes from hypothesis testing in this study. It can be seen that for all five of the research questions, sufficient evidence was identified to enable rejection of the null hypothesis. School leaders in the Emirate of Abu Dhabi were found to have higher than normative levels of CQ, higher than normative levels of transformational and transactional leadership styles, and high leadership adaptability. Further, a strong positive relationship was found between transformational leadership and CQ, and between CQ and leadership adaptability.

Table 4.41 Research questions and results of hypothesis testing

Research Objectives	Research Question	Hypothesis	Result
1. To estimate the level of Cultural Intelligence of school leaders in the Emirate of Abu Dhabi.	1. What is the level of Cultural Intelligence components of school leaders in the Emirate of Abu Dhabi?	<i>H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is not significantly different from the normative CQ level</i> <i>H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is significantly different from the normative CQ level</i>	Reject the null
2. To identify the predominant Leadership Style of school leaders in the Emirate of Abu Dhabi.	2. What is the predominant leadership style profile of school leaders in the Emirate of Abu Dhabi?	<i>H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level</i> <i>H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level</i>	Reject the null
3. To estimate the level of Leadership Adaptability	3. What is the level of Leadership Adaptability of school leaders in	<i>H₀: The average level of LA for school leaders in the Emirate of Abu Dhabi is not significantly different from the LA scale midpoint of 4.0 (moderate LA)</i>	Reject the null

of school
leaders in the
Emirate of
Abu Dhabi.

the Emirate of
Abu Dhabi?

*H₁: The average level of LA for school leaders
in the Emirate of Abu Dhabi is significantly
different from the LA scale midpoint of 4.0
(moderate LA)*

4. To
establish the
degree to
which
Cultural
Intelligence,
Leadership
Style, and
Leadership
Adaptability
are related.

a. Is the Cultural
Intelligence of
school leaders in
the Emirate of
Abu Dhabi
related to
Leadership
Style?

*H₀. There is no relationship between
Leadership Style and Cultural Intelligence*

**Reject the
null**

*H₁. There is a significant relationship between
Leadership Style and Cultural Intelligence*

b. Is the
Leadership
Adaptability of
school leaders in
the Emirate of
Abu Dhabi
related to
Cultural
Intelligence?

*H₀. There is no relationship between Cultural
Intelligence and Leadership Adaptability*

**Reject the
null**

*H₁. There is a significant relationship between
Cultural Intelligence and Leadership
Adaptability*

CHAPTER 5: DISCUSSION

5.1 Introduction

The purpose of this chapter is to discuss the results presented in Chapter Four, Data analysis, in the context of the literature reviewed in Chapter Two, and methodology described in Chapter Three. The chapter is divided into four main sections, starting with a brief reminder of the rationale for the study, and a brief overview of the research undertaken. This is followed by a discussion of the findings presented in this thesis, arranged by objective. A final conclusion on the discussion chapter is presented.

5.2 Thesis Rationale and Overview

The aim of this thesis is to understand the relationship between the levels of CQ and the ability to adapt leadership style amongst the leaders in the Abu Dhabi Education sector. Globalisation has led to an increase in the number of people moving between countries, resulting in cultures from around the world living and working side-by-side. This is especially apparent in Abu Dhabi, where globalisation is an integral factor in the cultural diversity of the Abu Dhabi population, which is made up from over 200 nationalities. This diversity is reflected in the make-up of its education system and schools; both staff and pupils alike represent several countries and cultures from around the world. This diversity leads to challenges for school leaders and requires them to respond with an understanding of cultural differences, adapting their leadership style to suit the context.

5.2.1 Overview of Research

To meet the aim, four objectives were identified, accompanied by five research questions and each having associated hypotheses. The thesis focussed on three distinct aspects of the characteristics of school leaders; their level of CQ, their leadership style, and their ability to adapt their leadership. To further the understanding of the characteristics of the school leaders, these aspects were examined together.

Focus groups were used to develop a new quantitative scale to measure and understand leadership adaptability, as a suitable existing scale did not exist. A scale of 13 leadership adaptability components was developed and tested for the first time, and was found to be internally consistent.

A quantitative approach to understanding CQ, leadership style, and leadership adaptability was chosen, and a multiple-choice questionnaire was used to capture these data from the school leaders. The questionnaire was sent to all heads of schools in Abu Dhabi (N=443); a response rate of 37.7% was achieved, with 167 respondents. The questionnaire was developed by taking existing instruments from previous research, and, as noted, developing a new scale to measure leadership adaptability with items derived from focus group sessions.

A thorough, quantitative approach to analysing data further validated the study design, as well as providing answers to five research questions. A brief summary of the results of the study, starting with an overview of demographic findings, and then subsequent findings by objective, are described in section 5.3.

5.3 Summary of Findings

The findings against each objective along with a discussion relating to its implications are summarised in the following four sections.

5.3.1 Demographic Findings:

From the demographic information captured in the questionnaire, it is evident that the education sector in the Emirate of Abu Dhabi is indeed diverse and that there is empirical evidence to support the claim regarding the diverse nature of the Abu Dhabi education sector. While the majority of school leaders in the sample were UAE national (46.7%), over 50% of the remaining school leaders were expatriates from various nations. The majority of schools in the sample (55.09%) were public schools and they are predominantly staffed by UAE nationals, in line with the government policy. Conversely, the remaining 43.71% of private schools are predominately staffed by expatriates (two respondents (1.2%) didn't answer this question).

The diversity of the Abu Dhabi education sector is proven further by the fact that the majority of schools (50.9%) have between 5 and 10 nationalities of staff, 19.16% have 11-15 different nationalities of staff, 7.78% have 16-20 nationalities. This data categorically supports the argument in the literature review that the Abu Dhabi education sector is indeed a diverse environment.

The majority of school leaders in the sample were female (64.07%) as compared to 35.33% male (one missing (0.6%)). This is an expected result as education and teaching as a whole is not favoured by males in the UAE for social reasons, and this is especially true among male Emirati's.

An interesting result, regarding the educational attainment of the school leaders, showed that the majority of school leaders in the Emirate of Abu Dhabi (46.71%) had technical or vocational training. This result is somewhat expected, given that the majority of the school

leaders in the sample were found to be UAE nationals; they will each have followed a UAE government directive which led them into training and vocational programs as a minimum requirement for their position. A further 11.38% had obtained a bachelor's degree, and 28.74% had a master's degree. Whilst the lack of higher education qualifications for educational leaders is concerning and may have implications for how educational training is carried out in the UAE, it is balanced by the fact that the majority of school leaders (39.5%) had between 11 and 20 years of experience, while 34.1% of school leaders had over 20 years of experience.

In conclusion, the diversity of the Abu Dhabi education sector has been demonstrated in the above demographic analysis. There is now strong support for the argument that was stated in the literature review chapter that leaders who work in culturally diverse environments, will need to have a capability in cultural Intelligence. Being culturally intelligent will greatly help school leaders in the Abu Dhabi education sector as they navigate the complexities they will undoubtedly face due to diversity.

5.3.2 Objective one - To estimate the level of CQ components of school leaders in the Emirate of Abu Dhabi

5.3.2.1 Summary

The first objective concerned the level of CQ of school leaders. Without prior research in this area, it was unknown whether school leaders in the Emirate of Abu Dhabi would have high, low, or intermediate levels of CQ. Previous research by Ang, Van Dyne and Koh (2006), but not undertaken in the UAE nor with school leaders, indicated that mean scores for the four components of CQ ranged from 3.18 to 4.89; approximately straddling the mid-point of the 1 to 7, strongly disagree to strongly agree scale.

The first objective was accompanied by a single research question, and two hypotheses.

RQ1: What are the levels of CQ components of school leaders in the Emirate of Abu Dhabi?

H₀: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is not significantly different from the normative CQ level

H₁: The average levels of CQ components for school leaders in the Emirate of Abu Dhabi is significantly different from the normative CQ level

The mean score for the CQ scale was found to be 5.59. Looking at the scale in its four distinct components, the mean scores ranged between 4.75 and 5.96. Using the CQS as a single scale, or as four components, mean scores tended towards the ‘strongly agree’ end of the 1 to 7 scale; therefore, indicating that the level of CQ of school leaders was high.

However, scores were not universal across the four components. The mean score for the ‘knowledge’ component of CQ was the smallest, at 4.75. For the other three components of CQ – strategy, motivation and behaviour – the mean scores were very similar to each other and much higher, ranging only from 5.89 to 5.96.

Several one-sample t-tests were used to test whether school leaders have levels of each of the four dimensions CQ different from the normative data in studies published by Ang, Van Dyne and Koh (2006) and Van Dyne, Ang and Koh (2008). Across these two papers, results of seven studies are published, making 28 comparisons. For all 28 tests, the results were deemed to be statistically significant, confirming that school leaders in the Emirate of Abu Dhabi have high levels of each of the four dimensions CQ. The null hypothesis was therefore rejected.

5.3.2.2 Discussion of Objective 1 findings

This result is very encouraging and not entirely unexpected. As no prior research had been carried out in the UAE among school leaders, there was no way of knowing or anticipating how culturally intelligent the school leaders in Abu Dhabi might have been. Bearing in mind that there was no evidence found in the literature of any CQ training or development being carried out in the UAE, the fact that school leaders scored highly in terms of their level of CQ is a very encouraging result (this finding will be discussed with reference to the literature later in the section). The levels of CQ, which were higher than the mean scores reported by Ang et al (2006) during the construct validation, could be simply explained by the fact that the UAE is a highly diverse environment. Both local and expatriate school leaders are used to living and operating in a multicultural society and these experiences will have positively impacted their levels of CQ.

The CQS scale was successfully implemented in a new geographical region and in a new sector is also a positive outcome of this research. Further, successful implementation included multiple analyses of the dimensionality of the CQ scale, all of which found results confirming the intended structure as developed by Ang, Van Dyne and Koh (2006). Ang, Van Dyne and Koh (2006) have called for further validation of the CQS scale in different regions and contexts and so this research will answer this call and add to the body of knowledge on the subject. Further, the CQ survey instrument was translated to Arabic for use in this study, and is therefore available for use in other studies of CQ with Arabic respondents. The strong performance against statistical tests affirms the translated Arabic CQ scale.

Crowne (2008) posed the following questions “What leads to high levels of CQ?” and “Why are some individuals more successful in a cross-cultural setting than others?”. Crowne (2008) argues that there are many types of experiences and depths of cultural exposure that can lead

to higher levels of CQ. These experiences lead to a greater level of cultural exposure thereby increasing the level of CQ. For example, exposure to various national cultures allows a person to become familiar with the norms, values and assumptions of that culture. As the UAE population is almost 90% expatriate, it is likely that many of the individuals living in the UAE will have had high levels of cultural exposure. An individual can also become familiar with a national culture through various means such as travelling, studying, reading, watching television, or by simply interacting with someone from that culture. Importantly, some levels of cultural exposure are more important than others; for example, foreign visits, long term immersion in a host culture (as would be the case with some of the school leaders), or expatriate work assignments can enable a person to gain a fairly complex cultural understanding of their host culture. This enables them to learn that intercultural experiences differ from normal experiences, in that they challenge a person's assumptions (Crowne, 2008).

Therefore, the high CQ levels can be partly explained by the fact that the school leaders in Abu Dhabi have had many different types of cultural exposure. The majority of respondents (50.9%) had 5-10 different staff nationalities in their school, and the majority (35.9%) had visited more than 10 countries, mainly for tourism purposes (54.3%). The majority of respondents (54.5%) had also spent between 1 and 10 years in other foreign countries and nearly 50% of respondents reported fluency in a language in addition to their mother tongue. It is clear that school leaders in Abu Dhabi have had opportunities for cultural exposure, and it is this exposure that has undoubtedly contributed to their ability to function more effectively in diverse environments.

Interestingly, school leaders in Abu Dhabi did not score uniformly across all four CQ dimensions (although all comparisons to the normative datasets were found to be significant). While they scored highly in Strategy (metacognitive CQ), Motivation (motivational CQ) and Behaviour, the mean score for the Knowledge (cognitive CQ) dimension was lower. It has been

argued that while individuals ideally have a balance across all four dimensions, some dimensions are more critical than others in terms of outcomes (Ang, Van Dyne and Koh, 2006).

Ang, Van Dyne and Koh (2006) postulate that the three dimensions of Knowledge (Cognitive CQ), Strategy (Metacognitive CQ) and Motivation (Motivational CQ) are internally processed by the individual, and then lead to outward manifestations of verbal and nonverbal actions (Behavioural CQ). If the Knowledge, Strategy and Motivation are all high, then the resulting Behaviour dimension should also be high, and the outcomes of the cultural interaction should be successful (Ang, Van Dyne and Koh, 2006). An individual with high Behavioural CQ will display suitable and acceptable behaviours in culturally diverse situations (Ang & Van Dyne, 2008; Earley & Ang, 2003). The importance of culturally sensitive outward manifestations of vocal, facial, and other outward expressions during intercultural interactions is well documented. For example, Ang et al (2007) argues that it is important to have high levels of behavioural CQ, as verbal and non-verbal actions are a noticeable and prominent feature of intercultural interactions. An individual with high behavioural CQ will endeavour to display suitable and acceptable behaviours in culturally diverse situations (Ang & Van Dyne, 2008; Earley & Ang, 2003). Therefore, if the Knowledge, Strategy and Motivation are all high, then the behaviour dimension should also be high, and the outcomes of the cultural interaction should be successful.

As the school leaders in Abu Dhabi scored slightly lower for the Knowledge component, this could impact their ability to handle multicultural situations effectively. The Knowledge component relates to a person's understanding of culture, and the cultural differences which exist between social groups. The Knowledge component consists of both visible and invisible components. For example, visible cultural differences include language, customs, and appearance, while invisible cultural differences include personal values, assumptions, attitudes

and beliefs. For an individual working in a multicultural environment, it is the invisible cultural differences that can be problematic, as they are 'hidden' and this is where tensions and misunderstandings can occur, and are more likely. It is perhaps this 'hidden' component of knowledge that respondents are aware that they are lacking knowledge of.

While it is impossible to have absolute knowledge about every type of cultural group, it is beneficial if an individual can learn a core set of values on which different cultures vary. This will increase their understanding and adaptability of broad cultural differences and cultural variations, relevant to any given context or setting and enable them to be more creative and flexible in their interpretation and responses (Van Dyne et al, 2012). This result therefore strengthens the case for school leaders to have formal training that provides them with information and knowledge relating to the core cultural values of other groups. Formal CQ training would be able to facilitate this.

An important and encouraging finding is that the school leaders in the emirate of Abu Dhabi scored significantly higher than the normative scores for the Motivational CQ component. It was argued in previous research, and confirmed by the founder of the CQ concept; Prof Soon Ang, during personal interview (See Appendix 9), that the Motivational CQ factor is the most crucial of all the components, as it is the factor which triggers and drives the subsequent Cognitive (Knowledge) and Metacognitive (Strategy) processes which occur during behaviours such as intercultural encounters (Ang & Van Dyne, 2008; Templer et al., 2006, Gooden, et al., 2017, Ang, 2014). An individual may have cultural knowledge about a specific social group and may also have the strategic ability to interact with them, but if they lack the motivation to engage in cross cultural interactions, then the acquired knowledge and strategy will not be put to good effect. People who have high levels of motivational intelligence actually enjoy engaging in cross cultural experiences, they enjoy interacting with individuals from

different cultures, and they actively push themselves to master the nuances of cross cultural interaction (Templar et al, 2006).

The findings against this objective have provided significant contributions to theory, most notably by full testing of the CQ scale, in a new geographical setting, and with school leaders. The successful implementation of the scale can give confidence to other researchers investigating CQ in other Arabic nations (perhaps similar to Abu Dhabi), but also to researchers looking to use the scale in another new region, where it has not been used previously. The successful use of the scale in a new geographical location in this study may point to the scale being able to be applied universally, regardless of location (although further testing is required).

Further, the scores for CQ presented in this study can be used as a normative dataset for use for comparisons with other CQ studies, such as the meta-analysis by Solomon and Steyn (2017). The scores presented here provide a normative dataset for CQ in Abu Dhabi and for CQ of school leaders, both of which can be used for comparisons in future studies.

In the review by Solomon and Steyn (Ibid.), several themes relating to CQ were identified. Of note is the first theme identified, which suggests that CQ can be adapted according to the cultural situation which the leader finds themselves in, directly relating to this and objective 3 concerning leadership adaptability.

Further, the review by Solomon and Steyn (2017) suggests that CQ is a malleable concept which can be learnt, can improve job performance, can be stimulated by exposure to other cultures, advances team knowledge, and can be used to predict leadership potential. Therefore, the results of this research objective are very encouraging for the UAE education sector. The literature identified that CQ is an important attribute for leaders in all types of organisations, especially culturally diverse organisations. Numerous authors in the area of CQ have brought

to the fore the issue of leadership and influence of CQ on successful leadership processes within organisations. For example, Livermore (2010) states that leaders with advanced capabilities in CQ “greatly contribute to leadership effectiveness and performance outcomes in culturally diverse teams” (Livermore, 2010; p. 41) while Rockstuhl et al., (2011) states that “results show the value of cultural intelligence as a critical leadership competency in today’s globalised world” (Rockstuhl et al., 2011; p. 826). With school leaders in the Emirate of Abu Dhabi demonstrating high levels of CQ, they will not only be able to benefit themselves by having such a tool at their disposal, but also benefit others by having demonstrated proficiency in what is considered to be a critical leadership competency.

5.3.3 Objective 2: To identify the predominant Leadership Style of school leaders in the Emirate of Abu Dhabi.

5.3.3.1 Summary

This second objective concerned the leadership style of the school leaders in Abu Dhabi. No previous research had been undertaken in the Abu Dhabi education sector to guide thinking for this objective. It was therefore unknown whether the school leaders would exhibit a transformational, transactional or a laissez-faire leadership style.

The second objective again had a single research question, and accompanying hypotheses:

Research Question 2: What is the predominant leadership style profile of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is not significantly different from the normative MLQ level

H₁: The average level of MLQ for school leaders in the Emirate of Abu Dhabi for each of the three leadership styles is significantly different from the normative MLQ level

Descriptive statistics indicated that the school leaders were most likely to exhibit transformational and transactional leadership styles, and very few exhibit a laissez-faire leadership style. Difficulties were experienced when attempting to reduce the 36-item MLQ5X questionnaire into the nine dimensions identified in previous research. Unsuccessfully, confirmatory factor analysis was attempted in order to replicate the dimensions identified in previous research with the data from this study. A further exploration of the data using confirmatory factor analysis was attempted, removing the items with the lowest factor loadings in an attempt to improve the performance of the model. Again, unsatisfactory results were found. Further testing of the model, identifying just three dimensions (transformational, transactional and laissez-faire) as well as models solely for each of the three dimensions also provided unsatisfactory results.

The results from the dimension reduction tests did not support the nine-factor model as proposed by Bass and Avolio (2004). However, the manual describing the MLQ scale (Bass and Avolio, 2004) shows results from numerous factor models (one, two, three, and nine), perhaps suggesting that the factor structure of the MLQ scale is variable and perhaps dependent upon the respondents and the context.

Due to the large number of studies that have previously used the MLQ5X questionnaire, and the several thousand participants in these studies, it was decided to use the dimensions identified in previous research in preference to the results of the dimension reduction tests from this study. This allowed for a comparison between the mean scores for each of the leadership styles in this study, with a normative dataset published by Bass and Avolio (2015).

T-tests revealed that the school leaders in this study were found to have significantly higher mean scores for the transformational and transactional leadership style constructs when

compared to the normative dataset; scores were not significantly different for the laissez-faire construct. The predominant leadership style was found to be transformational.

The MLQ5X scale was translated to Arabic for the purposes of this study.

5.3.3.2 Discussion of Objective 2 findings

It was found that school leaders in the Emirate of Abu Dhabi demonstrated predominantly transformational leadership styles, and that these scores for transformational and transactional leadership styles were significantly higher than the normative dataset, so the null hypothesis was rejected. Limited studies were identified which addressed the leadership style of educational leaders in the emirate of Abu Dhabi, or the UAE, and so it is difficult to fully analyze this result in context.

By looking at the result in relation to previous studies of leadership style, and the role of leadership style in the education sector as a whole, it can be stated that these findings are encouraging for the Abu Dhabi education sector as a whole as the majority of school leaders are practicing a well-established and effective leadership style.

Leadership style refers to the model of organizational behaviour exhibited by a leader. It can influence the overall functioning of the organisation based on the leader's positive or negative manner in dealing with the organisational members. The transformational leader "*recognizes and exploits an existing need or demand of a potential follower, identifies potential motives, seeks to satisfy higher needs, and fully engages the follower*" (Burns, 1978; p. 4.) while the transactional leaders have a strong ability to focus on responsibilities, "*performance objectives, and tasks that must be completed of their followers*" (Eptropaki and Martin, 2005; p. 27).

While there are advantages and disadvantages of both transformational and transactional leadership styles, a number of studies have proven the superiority of transformational over

transactional styles of leadership (Avolio and Bass, 2004; Dvir et al, 2002; Erkutlu, 2008; Northouse, 2007; Waldman et al, 2001). The main premise is that transformational leadership can result in greater performance, surpassing expectations (Avolio and Bass, 2004; Erkutlu, 2008; Limsila & Ogunlana, 2008). However, it is evident in the literature that there is a school of thought that believes that it is beneficial to combine both transactional and transformational approaches. A combination of both transactional and transformational leadership approaches, knowledge of when to use them, enables a leader to understand which approach will bring out the best in their followers, and whether the environment is conducive to improve performance by the followers (Avolio and Bass, 2004).

The literature review (see chapter 2, section 2.6.2) demonstrated that there is a plethora of evidence linking transformational leadership and positive outcomes in educational leadership settings. For example, Leithwood & Jantzi (2005) linked transformational leadership to a number of individual and organisational outcomes in school settings. Other authors (Bogler, 2001; Keung, 2013; Ross & Gray, 2006; Silins & Mulford, 2002) found empirical evidence to support the positive impact of transformational leadership on individual outcomes such as, direct and indirect effects on increasing teacher's commitment and teacher's job satisfaction; as well as organisational outcomes such as school culture, organisational planning and learning, and strategies for change (Leithwood & Jantzi, 2005).

One study examined the effects of transformational and transactional leadership on teachers' job satisfaction, organizational commitment, and organizational citizenship behaviour in the context of schools in Tanzania. The findings indicated that Transformational leadership had significantly more positive impact in prediction of job satisfaction, organizational commitment, and organizational citizenship behaviour, than transactional leadership. (Nguni et al, 2006).

However, while the literature strongly supports the positive relationship between transformational leadership style and positive outcomes in an educational context, there is limited evidence to support this from a UAE or Abu Dhabi school leader perspective. One study which focused on principal leadership style in Dubai, had results which closely replicated results from this study. Ibrahim & Al Al-Taneiji (2013) found that school principals in Dubai most frequently employed transformational leadership, followed by transactional leadership, and then passive/avoidant style or laissez faire style. Another study, carried out by Mahdi et al (2012), investigated the relationship between CQ and the leadership styles of primary school managers in Iran. Their study concluded that there was a positive relationship between CQ and transformational leadership style. The authors went on to argue that in educational institutions, with large and ethnically diverse numbers of teaching staff, administrative staff, and student body, it is essential that a leader has an effective leadership style. In an unpublished doctoral thesis entitled, “Perceptions of school leaders in the United Arab Emirates” Litz (2014) also found that the majority of school leaders in the sample felt that they demonstrated transformational leadership, yet their subordinates felt that their leadership style was more transactional. Litz (2014) went on to argue that while transformational leadership is possible among school leaders in the UAE, the practice of transactional leadership is also widespread among school leaders. The findings of the Litz (2014) study concur with the findings from this study, that school leaders rate themselves as exhibiting predominantly transformational leadership style.

Bass and Avolio have clearly identified differences between the styles, but more importantly they argued “*that transformational leadership is not a substitute of transactional leadership rather it augments transactional leadership in achieving the goals of the leaders, associate, group and organization*” (Avolio & Bass, 2004; p. 21). The complimentary nature of

transformational and transactional leadership is well established, and so it is interesting that these two should be the most predominant of the three leadership styles among the Abu Dhabi educational leaders.

A surprising result is that very few of the respondents demonstrated a laissez - faire leadership style. Laissez - faire leadership is described by Northouse, (2016), as a leader who abdicates responsibility, delays decisions, gives no feedback, and makes little effort to help followers satisfy their needs. This is in contrast to the theory of the full-scale leadership model, based on the inference that *"fundamental to the full range leadership model (FRLM) is that every leader displays each style to some degree"* (Avolio, 2010; p. 67). Avolio's argument suggests that it is appropriate on some occasions for leaders to demonstrate laissez -faire leadership style, for example in specific situations where it is not productive for the leader to get involved and for the followers to be allowed to solve certain situations without leader involvement. Another explanation for this result could be due to the fact that this was self-reporting questionnaire and school leaders were reluctant to admit to having a laissez faire leadership style (Donaldson and Grant-Vallone, 2002).

The findings against this objective have provided significant contributions to theory, most notably by testing the full MLQ scale in a new geographical setting, and with school leaders. However, caution should be applied as the expected dimensionality of the scale was not discovered (as noted, the issues of dimensionality of the scale are apparent from the MLQ manual, where several solutions are presented). Further testing of the MLQ scale in Arabic settings, and with school leaders, will provide further evidence and clarification on the issues of dimensionality in the scale.

Adopting the intended dimensionality allows for the development of a normative dataset of MLQ for use in comparisons in future studies. Presented here are normative scores from an

Arabic setting, and for school leaders, both of which can be used in future studies to provide comparisons and inform classification of style of leadership.

To conclude, the analysis presented for this research question indicates that school leaders in the Emirate of Abu Dhabi *exhibit predominantly transformational leadership style*, and that scores for both the transformational and transactional leadership styles are significantly higher than normative dataset, allowing for a rejection of the null hypothesis.

5.3.4 Objective 3: To estimate the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi

5.3.4.1 Summary

The third objective aimed to estimate the level of leadership style adaptability. The leadership adaptability scale was developed during the course of this research, resulting from the focus group sessions, and therefore there are no prior uses of the scale. The scale sought to determine the level of school leaders' ability to adapt their leadership.

For this objective the following research question and hypothesis will be tested:

Research Question 3: What is the level of Leadership Adaptability of school leaders in the Emirate of Abu Dhabi?

H₀: The average level of LA for school leaders in the Emirate of Abu Dhabi is not significantly different from the LA scale midpoint of 4.0 (moderate LA)

H₁: The average level of LA for school leaders in the Emirate of Abu Dhabi is significantly different from the LA scale midpoint of 4.0 (moderate LA)

Descriptive statistics indicated that the school leaders adapted their leadership, with high mean scores (5.48 to 6.48) across the 13 items. Dimension reduction techniques were employed, and

satisfactory results were obtained allowing the 13-item scale to be reduced to a single latent construct. A mean score for the school leaders of 5.95 was identified, from a 1 to 7 scale with higher scores indicating stronger agreement with adaptive behaviours.

A single one-sample t-test was used to test whether school leaders have levels of leadership adaptability different to the mid-point of the scale, which might have been expected if the leaders exhibit moderate adaptability. The results were deemed to be statistically significant, confirming that school leaders have high leadership adaptability, allowing for a rejection of the null hypothesis.

Findings for validating the new leadership adaptability scale were positive. Discriminant validity tests using dimension reduction techniques (Principal Components Analysis/Principal Axis Factoring/Maximum Likelihood Method) each found there are five distinct factors identified; the leadership adaptability scale was found to be separate from the four dimensions of the CQ scale, which were all identified separately also, the newly developed scale instrument being available in both English and Arabic opens up these concepts to audiences in their native language.

5.3.4.2 Discussion of Objective 3 findings

It was found that the mean value of Leadership Adaptability of School leaders in the Emirate of Abu Dhabi is high and significantly different to the midpoint of the scale, and so the null hypothesis is rejected.

This result tells us that school leaders in the Emirate of Abu Dhabi are highly adaptable leaders. This result is encouraging because adaptive leadership has recently become the focus in leadership literature as it has been identified as being a critical leadership capability. It is

prudent to point out at this early stage that while this result is encouraging, it is derived only from self-reports. Regardless, of this issue relating to self-reporting, the fact that this scale has been developed to fit the UAE context, and has proven itself to be reliable is an encouraging first step, considering the dearth of literature and tools available to measure leadership adaptability.

As there has been no previous research which has addressed adaptive leadership among school leaders in an Abu Dhabi (UAE) context, no comparisons can be made to other research findings. However, broadening the scope to include findings from this result with more general findings from the body of knowledge on leadership adaptability, provides some comparisons.

Overall, the fact that school leaders in the Emirate of Abu Dhabi have demonstrated high levels of leadership adaptability is perhaps the highlight of this research. Having adaptable leaders will greatly benefit schools in Abu Dhabi as their leaders will be able to react and adjust their behavior accordingly depending on the situations encountered. Leadership adaptability is a highly desirable attribute that will greatly enable them to navigate the various challenges, especially those relating to diversity, in the UAE.

Bass (2003) argued that the rapid and continual pace of change that organisations today must cope with, has driven the need for more flexibility and adaptive leadership. Those leaders, defined as ‘Adaptive Leaders’, are those who can operate most effectively in changing environments. Therefore, this result is significant as school leaders in the UAE are ready for the challenges they face. Bass (2003) goes on to state that adaptive leaders can identify and makes sense of the challenges they face, as well as those of their followers, and they are then able to respond appropriately. This concept is grounded on the idea that adaptive leaders cooperate with their followers to devise innovative solutions to issues,

while enabling them to cope with a wider variety of leadership responsibilities (Bass, 2003; Bennis, 2001).

Despite the obvious argument for adaptive leadership there still remains a considerable lack of clarity in leadership and management writing about the actual nature of Adaptive Leadership, as well as how it might best be assessed and measured. Certainly, some of the ambiguity arises from the fact that Adaptive Leadership can occur in a variety of contrasting contexts (Northouse, 2016). Measuring the concept of adaptability is also a challenging task that is dependent on many factors and there were no studies in the literature that were found that measured leadership adaptability. For this reason, it was felt that it would be prudent for the researcher to develop a tool for measuring leadership adaptability that would be suitable for the specific context.

The findings against this objective have provided significant contributions to theory, most notably by developing a new scale for measuring leadership adaptability. Although used only once in this study, researchers looking to measure leadership adaptability can find confidence in the good scores found for dimensionality and reliability of the newly developed scale. Further, as with the findings against the first two objectives, the scores for leadership adaptability presented in this study provide a normative dataset for use in comparisons in future studies.

The findings from this study should also provide comparison with the meta-analysis by Solomon and Steyn (2017), with specific reference to the first theme identified in their review, which suggests that cultural intelligence is adaptable. Whilst this objective is slightly different, it is the leadership which is being adapted, rather than the cultural intelligence, the leadership is being adapted in reaction to cultural differences observed by the leader. They are therefore adapting their leadership using their cultural intelligence, in congruence with the first theme identified by Solomon and Steyn (2017).

The leadership adaptability scale developed for this research was context specific and was proven to be reliable. More testing of this scale is required in both the same context and in other contexts before its reliability can be definitively concluded. However, as there are no other scales available in the literature to compare results with, it can be concluded for now that this scale is a good first step in measuring leadership adaptability in a UAE educational leadership context.

5.3.5 Objective 4: To establish the degree to which Cultural Intelligence, Leadership Style, and Leadership Adaptability are related.

5.3.5.1 Summary

The final objective sought to understand if there were relationships between the three instruments. It was unknown whether school leaders with certain characteristics, such as high cultural intelligence, might consistently exhibit other characteristics, such as high leadership adaptability or a transformational leadership style, for example.

For this objective the following questions and hypotheses will be tested:

Research Question 4a: Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style?

H₀: There is no relationship between Leadership Style and Cultural Intelligence

H₁: There is a significant relationship between Leadership Style and Cultural Intelligence

Research Question 4b: Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence?

H₀: There is no relationship between Cultural Intelligence and Leadership Adaptability

H1: There is a significant relationship between Cultural Intelligence and Leadership Adaptability

5.3.5.2 Discussion of Objective 4 findings

In relation to the relationship between leadership style and level of CQ of school leaders, the results indicate that there is a significant relationship between transformational leadership style and cultural intelligence, so we reject the null hypothesis. This is unsurprising as the results concur with other research findings which have successfully linked transformational leadership style with high levels of CQ.

For example, Keung and Rockinson-Szarkiw (2013) focused on international school leaders. Findings revealed a “*significant positive relationship between cultural intelligence and transformational leadership*” (Rockinson-Szarkiw, 2013; p. 836). It was also documented by the authors that “*leaders who have high levels of cultural intelligence also exhibit high levels of transformational leadership style*” (Rockinson-Szarkiw, 2013; p. 841). This finding suggests that leaders with high CQ are more effective at managing in multicultural environments, and in particular, behavioural and cognitive (strategy) CQ were found to be the best predictors of transformational leadership. Similarly, in a study of school managers in Iran by Mahdi (2012), the existence of a positive and meaningful relationship between CQ and transformational leadership was found.

In addition, Solomon & Steyn (2017) identified CQ of leaders as having a stronger relationship with transformational leadership than it had with transactional leadership. Also, Deng and Gibson (2009) theorised that effective leadership in a multicultural environment was dependent on three main inter-related constructs: transformational leadership, emotional intelligence, and CQ.

The role of school type was investigated, to understand whether it moderated the relationship between CQ and leadership style. Fifteen comparisons were made, using the Pearson correlation coefficient and Fisher r-to-z score, with only one of the fifteen found to be significant. It was concluded that school type does not moderate the relationship between CQ and leadership style.

Therefore, the conclusion for objective 4, question 4a “Is the Cultural Intelligence of school leaders in the Emirate of Abu Dhabi related to Leadership Style?” it was determined that *there is a significant positive relationship between Leadership Style and Cultural Intelligence* and so the null hypothesis is rejected.

The second research question (4b) for the fourth objective asked “Is the Leadership Adaptability of school leaders in the Emirate of Abu Dhabi related to Cultural Intelligence?” Correlations between all 20 CQ items and leadership adaptability, and the four dimensions of CQ and leadership adaptability were all found to be positive and significant.

The strong positive relationship between CQ and leadership adaptability, concurs with previous literature findings. In particular, work carried out by Glover, et al. (2002) which identified cultural competency as being one of the critical necessities required for adaptive leadership to occur (as defined in ‘The Adaptive Leadership theory’). In this study, it was argued that an adaptive leader who also demonstrates cultural competency is best placed to appreciate all the facets of human nature. This leader is then able to dig beneath the surface and obtain a full appreciation for the cultural values and beliefs of their team and use this knowledge to better manage and organise them (Glover et al., 2002).

The role of school type was again investigated, to understand whether it moderated the relationship between CQ and leadership adaptability. Ten comparisons were made, using the Pearson correlation coefficient and Fisher r-to-z score, with only one of the ten found to be

significant. It was concluded that school type does not moderate the relationship between CQ and leadership adaptability.

The findings against this objective have provided significant contributions to theory, most notably by providing evidence of the relationships between the instruments used in the study. The relationship between CQ and leadership style was known from previous research, and therefore this study contributes further evidence to verify this relationship, and further to establish it in a new geographical setting. As the leadership adaptability instrument was developed specifically for this study, the possibility of a relationship with CQ was unknown. This study therefore contributes to theory by establishing a relationship with CQ, albeit subject to further testing and development of the leadership adaptability scale.

Overall, this research indicated that CQ and leadership adaptability are related, allowing for a rejection of the null hypothesis. Individuals possessing high levels of CQ have the capacity to gather and manipulate information, draw conclusions from it, and then react to the cultural cues of all those they come into contact with, utilising the appropriate cognitive, emotional or behavioural actions (Earley and Ang, 2003). These intercultural competencies are also expected to enhance adaptability and minimise miscommunications of role expectations. CQ therefore has a direct bearing on this adaptability, as it helps individuals to adapt and adjust more straightforwardly to a host environment (Earley and Ang, 2003). Therefore, it is not surprising that the participants in this research demonstrated high levels of capabilities in both CQ and leadership adaptability, as both constructs are inextricably linked.

5.4 Conclusion

As there has been very little research carried out in the UAE relating to CQ, leadership style and leadership adaptability, the discussion of the results obtained in this research was going to

be difficult as there were very few contextual examples to provide a direct comparison. Overall, when comparing the results to previous findings, there were many positive outcomes. High levels of CQ indicate that school leaders in Abu Dhabi have strong abilities in this crucial leadership competency. Extensive levels of cultural exposure could have explained these high levels as there was no evidence of direct training or development.

Leadership styles were found to be predominantly transformational. This finding was supported by a recent study carried out with school leaders in Dubai, whereby self-reports from school leaders identified themselves as transformational leaders. Scores for both transformational and transactional components of leadership style were found to be significantly higher than normative data.

School leaders in the Emirate of Abu Dhabi demonstrated high levels of leadership adaptability. The leadership adaptability scale was developed for this particular context, and is a useful addition to the body of knowledge on leadership adaptability, although significant further testing is required.

A direct link was found between CQ and leadership style, as might have been expected according to the literature. This was an unsurprising result as previous studies have indicated a strong relationship between high CQ and transformational leadership style.

This research indicated that CQ has a positive relationship with leadership adaptability. All four CQ dimensions (Strategy, Knowledge, Motivation and Behavior) were found to have a significant relationship with leadership adaptability. There was no previous evidence linking CQ and leadership adaptability, and so this study has contributed to this body of knowledge in this respect, by linking the two constructs and finding a significant correlational relationship.

CHAPTER 6: IMPLICATIONS AND CONCLUSIONS

The final chapter of the thesis discusses the implications of the research findings for theory and for the stakeholder groups. In addition, recommendations are put forward whereby the outcomes of this research can be turned into actions that can improve school leadership in the emirate of Abu Dhabi. Final conclusions on the research complete this chapter.

6.1 Implications and recommendations resulting from findings

There are several implications arising from this research; for the UAE education sector, including staff and pupils alike, for policymakers at the UAE government and education department, and for future research. These implications are covered in the following three sections.

6.1.1 Theoretical implications

The results of this thesis will have implications for academics carrying out research in similar fields. This section highlights the main implications resulting from the research that will add to the body of knowledge on CQ, leadership style, and leadership adaptability, set out according to the research objectives.

The first objective of the research identified that school leaders in the emirate of Abu Dhabi exhibited *high levels of cultural Intelligence (CQ)*. A number of theoretical implications arising from the research findings have been identified:

- The first finding with implications for theory is that *school leaders in the emirate of Abu Dhabi (UAE) are, in the whole, culturally intelligent*. There were no previous

studies that measured the CQ of school leaders in the UAE, and so this research has addressed this gap.

- The CQ scale had never been applied in an Abu Dhabi setting previously, and also never applied in a UAE school leader context, and so this research has added to the nomological network of CQ. It can therefore be stated that the CQ scale is applicable in a UAE context.
- The results of the dimension reduction and reliability analysis presented against this research question are in accordance with previous findings, thus proving applicability and independently replicating part of the validation of the scale in a new geographical location.
- The translation of the CQ scale instrument to Arabic is an important contribution, as it opens up these concepts to new audiences in their native language, estimated to be more than 400 million people. Further, the collection of CQ scale results from Arabic respondents is a first.

The second objective of the research identified that school leaders in the emirate of Abu Dhabi exhibited predominantly transformational leadership style, and that scores for both the transformational and transactional components were significantly higher than normative data. A number of theoretical implications arising from the research findings have been identified:

- School leaders in Abu Dhabi predominantly demonstrate transformational leadership style. There was little prior evidence of other research regarding the predominant leadership styles of school leaders in the UAE, and none in the emirate of Abu Dhabi. The findings presented in this thesis offer the first full use of the MLQ5X scale in Abu Dhabi with school leaders and has provided a baseline for this measure. This result is a useful starting point from which to expand the research relating to school leadership

style in Abu Dhabi. This may include investigating the effect of school leadership style and other school outcomes, such as school performance or student attainment, for example, to understand if there is any correlation.

- The results from the dimension reduction tests did not support the nine-factor model as proposed by Bass and Avolio (2004). However, the manual describing the MLQ scale (Bass and Avolio, 2004) shows results from numerous factor models (one, two, three, and nine), perhaps suggesting that the factor structure of the MLQ scale is variable and perhaps dependent upon the respondents and the context. Further research is required to understand whether the issues with identifying dimensions from the scale is unique to the context of this study. Many of the MLQ5X studies are undertaken in western countries.
- Transformational leadership was found to be the predominant leadership style. This is a very significant finding as transformational leadership is considered to be vitally important to the success of educational leadership. Previous research has highlighted that transformational leadership may not always fit with the UAE's hierarchal society. Further research relating to the component of transformational leadership style is required in order to gain more insights into the exact nature of the leadership style being practised in Abu Dhabi.
- The full range of leadership styles are typically not being utilised (only a handful of respondents exhibited laissez-faire leadership style). It has been argued in the literature that all leadership styles can be useful, depending upon the audience and the context. Further research is required into the application and suitability of the three leadership styles in a UAE educational context. Previous research has suggested that a combination of transformational and transactional leadership styles is more appropriate if improvement of school performance and student attainment is the desired outcome

(Ibrahim & Al-Teneiji, 2013). Further research must be carried out in order to determine the impact of various leadership styles on school outcomes in the emirate of Abu Dhabi. Step by step, educational leaders should move beyond a general focus on the impact of leadership to examining and increasing the frequency of particular leadership practices that make greater positive impacts on schools (Ibrahim & Al-Teneiji, 2013).

- Results have indicated that most school leaders in the Emirate of Abu Dhabi do not typically demonstrate the laissez-faire leadership style. The literature has demonstrated that there is a place for laissez faire leadership in the context of the full range leadership model. It could be argued that due to self-reporting, respondents did not want to admit to this style of leadership. Therefore, future research is recommended to understand the perspective of subordinates/followers to the findings presented here, as it may provide a better understanding of the findings.
- The present study only identified self-reports, which are subject to self-report bias. An understanding of leadership style from the perspective of subordinates / followers may provide an alternative perspective to the findings presented here, and is recommended in any future research studies. In a study by Litz (2014), school leaders in Dubai who indicated that they practised a transformational style, were deemed to be more transactional in nature by their staff.
- Litz (2014) argued that any discrepancies in leadership styles observed between the UAE and other western countries (where the model originated) can be due to the differences in culture between the UAE and western nations. It is therefore recommended that this be considered when research is carried out into leadership styles in a non - western setting. Further research is required into the applicability of leadership style models, such as the MLQ5X, in a cultural setting such as the UAE.

- The MLQ5X scale is translated and available for use in Arabic

The third objective of the research found that school leaders in the emirate of Abu Dhabi adapt their leadership style. A number of theoretical implications arising from the research findings have been identified:

- A new leadership adaptability scale was developed which took into consideration the specific context of adaptive leadership for school leaders in Abu Dhabi. The results presented here were found to be encouraging, and therefore this scale should be tested to further validate the findings in a UAE education context. This scale must also be further tested in other contexts, such as other countries or with other leader types, in order to further determine its reliability and validity.
- There were no previous studies which identified the leadership adaptability of school leaders in the UAE. The results from this study indicated that school leaders are highly adaptable.
- The scale is available in two languages, English and Arabic.

The fourth objective identified a strong positive relationship between CQ and leadership style, and a strong relationship between CQ and leadership adaptability for the school leaders in Abu Dhabi. A number of theoretical implications arising from the research findings have been identified:

- The findings presented here concur with previous findings which have established a positive relationship between CQ and MLQ, and specifically the transformational component of leadership style and CQ.
- The identification of this relationship is the first occurrence in a UAE context

- Both of the implications indicated above further the understanding of each of CQ and MLQ, as well as furthering understanding of how they work together and in a new context.

6.1.2 Implications and recommendations for the UAE education sector – for school leaders, other staff, pupils, parents and educational authorities.

The findings of this study present some important practical implications for all stakeholders in the Emirate of Abu Dhabi education sector. These stakeholders include the school leaders themselves, the schools, the staff who work in the schools, the students, and the students' parents. On a wider scale the results also have significant implications for the Abu Dhabi educational authorities and indeed the UAE educational authorities as a whole, as they are related.

The following section will identify all the implications of the research by objective:

The first objective of the research identified that school leaders in the emirate of Abu Dhabi exhibited *high levels of cultural Intelligence (CQ)*. A number of implications arising from the research findings have been identified:

- Firstly, it must be stated that this is a very positive finding for all stakeholders as they will all reap the benefits of having culturally intelligent leaders. CQ is a critical leadership competency, and so it is an important skill for any leader. School leaders with high CQ will have an increased awareness of their own cultural identity and norms, and that of their staff, students, parents and other stakeholders. They will be able to identify the unique individual factors of their staff and students from differing cultures, and so initiate appropriate responses. Overall, they will then benefit from being able

to deal with a multicultural staff, student and parent body and all the issues that may arise from such diversity.

- As high CQ is a predictor of positive leadership outcomes in schools, the level of CQ should be a consideration when future school leaders are being recruited in the Emirate of Abu Dhabi. Educational authorities could introduce a CQ assessment as part of the recruitment process. This will enable them to ensure that school leaders have capabilities in CQ and can also be used to identify gaps in the CQ abilities that can be addressed by training.
- CQ is a malleable construct that can be learned and developed. While not a direct outcome of this research, it is evident in the literature that cultural exposure can lead to higher levels of CQ. Demographic analysis in this research also indicated that school leaders in Abu Dhabi have a significant level of cultural exposure. This is something that should be encouraged throughout the education system and could be incorporated into school leadership training e.g. working overseas, leadership exchange programs, frequent travelling, language skills etc.
- While this research focused on school leaders and not school staff, it is important to recognize that the CQ concept can be extended to all staff members in school situations. They will also face the same issues relating to cultural diversity as the school leaders and should also be given the opportunity to develop their capabilities to handle these situations more effectively.
- School leaders demonstrated a lower score in the knowledge component of CQ. As there are over 202 nationalities in the UAE it would be impossible to learn the cultural norms of all different types of people. However, it is recommended that school leaders identify the most prominent cultural groups within their institutions and ensure that all

staff are given training on the cultural norms of each group. This will increase their CQ knowledge component which in turn will help them to become better leaders.

- CQ is a malleable construct that can be improved upon and can be practiced regularly. School leaders should ensure that, along with their other staff, both are given the opportunity to develop and practice all four aspects of CQ frequently. For example, Cognitive CQ (knowledge), can be improved by learning specific cultural information. Earley and Ang (2006) propose that the use of “The Culture Specific Assimilator model” is one such intervention that can increase cognitive CQ. Metacognitive CQ (Strategy) can be improved by taking part in cognitive structure analysis that methodically examines the hidden assumptions and beliefs of everything around us (Keung, 2013). Reflection activities such as the journaling of both positive and negative cross-cultural experiences is also beneficial, as is actively planning all future cross-cultural encounters (Livermore, 2010). Motivational CQ (Drive) can be improved upon by focusing on personal successful outcomes of cross cultural interactions. This reinforces an individual’s self-efficacy or belief in their ability to handle cross cultural situations (Earley & Peterson, 2004). Livermore (2010) also suggests that motivational CQ can be improved by thinking about what will happen if you are not culturally intelligent. Behavioural CQ can be improved by taking part in role play and simulation exercises, whereby the school leader learns the various nuances of behaviour which should be implemented during cross cultural interactions. This will involve cognitive, sensory emotional and physical considerations (Earley & Peterson, 2004).
- Educational policymakers should consider integrating CQ into the training and development of school leaders in Abu Dhabi to ensure that all school leaders in the Emirate have a similar level of competency. Training programs can take many forms

such as professional development days to raise awareness of CQ, formal week-long training programs to allow for in-depth analysis and specific training or seminars to allow for regular follow up and professional development (Keung, 2013). Initial training should always begin with carrying out a full pre -assessment of the individuals' CQ capabilities so that progress can be monitored. This research has identified a baseline for school leaders in the Emirate of Abu Dhabi. Educational authorities can use this baseline to target their training for the whole sector.

- Educational Authorities should consider integrating CQ into national curriculums in order to ensure that pupils, who may become future leaders in Abu Dhabi, have capabilities in CQ.

The second objective of the research identified that school leaders in the emirate of Abu Dhabi exhibited predominantly transformational leadership, and that scores for transformational and transactional leadership style were significantly higher than the normative dataset. A number of implications arising from the research findings have been identified:

- It is encouraging that school leaders in the emirate of Abu Dhabi exhibit *predominantly transformational leadership style* as previous research has indicated that it may be the most effective given the context (Litz, 2014). However, the fact that few school leaders in the Emirate of Abu Dhabi exhibited laissez faire leadership style may indicate that the leaders are not utilising the full range of leadership styles as proposed by Bass and Avolio (2002).
- It is important that school leaders in the emirate of Abu Dhabi are aware of all the different types leadership styles and how each of them can be employed in certain contexts to achieve positive outcomes.

- Educational policy makers in Abu Dhabi must consider what is the best combination of leadership styles to promote and endorse to their school leaders.
- School leaders should attend professional development and seminars that focus on the full range of leadership styles and their implementation. This will help school leaders to develop their skills across a wide range of styles as well as help them to choose which style is appropriate to a specific context.

The third objective of the research found that school leaders in the emirate of Abu Dhabi adapt their leadership style. A number of implications arising from the research findings have been identified:

- Results of this study tells us that school leaders in the Emirate of Abu Dhabi are highly adaptable leaders, giving an indication of their ability to handle the challenges they will encounter, especially challenges related to cultural differences. This result is encouraging as adaptive leadership has recently become the focus in leadership literature as being a critical capability. Educational authorities in the Emirate of Abu Dhabi should consider capitalising on this by empowering leaders to deal with more challenging and complex situations.
- Leadership adaptability is a dynamic construct that can be changed and improved upon, and so school leaders in the Emirate of Abu Dhabi must actively seek out situations and challenges whereby they can practise, develop and improve their leadership adaptability skills.
- Educational authorities in the Abu Dhabi could incorporate leadership adaptability training, seminars and workshops for all school leaders to enable them to receive formal instruction and practise in the skill. Nelson et al (2010) propose that leadership

adaptability training can take a number of forms. Experiential adaptability training involves taking part in various scenarios whereby the leader is required to completely change their existing strategy while leaders can also use feedback and guidance mechanisms before, during and after events to help them adapt accordingly. It is also argued that the environment at leader operates in is also highly influential in terms of their ability to become adaptable.

The first research question (question 4a) of the fourth objective found that there is a relationship between transformational leadership style and CQ in this context.

- This is a positive finding for the education authorities in UAE, as it has been shown in the past that transformational leadership is more effective in the presence of increased levels of CQ (Mahdi et al, 2012), and that the two combine to deliver competent leaders, able to transform their organisations with an understanding of the importance of the cultural context.
- Further to the implications identified against RQ1 and RQ2 for CQ and MLQ separately, educational policymakers should consider integrating both CQ and transformational leadership together into the training and development of school leaders and staff in Abu Dhabi to ensure that all school leaders in the Emirate have a similar level of competency.

Findings against the second question (question 4b) of the fourth objective identified a strong relationship between CQ and leadership adaptability for the school leaders in Abu Dhabi. This is important as it emphasises that CQ is a critical leadership competency and is strongly related to a leader's ability to adapt their leadership style. School leaders with high levels of CQ will have an increased capacity to generate and assimilate information relating to cultural diversity, and will be better able to demonstrate the appropriate cognitive, emotional and behavioural

responses. This sequence of events will enhance their ability to adapt their leadership style to achieve this response. A number of implications arising from the research findings have been identified:

- Both CQ and leadership adaptability are malleable constructs which can be improved upon. Therefore, school leaders must actively seek out situations and challenges which are characterised by cultural diversity, whereby they can combine their CQ and leadership adaptability skills.
- Results indicated that all four of the CQ dimensions were found to have a significant relationship with leadership adaptability and so any leadership adaptability interventions should consider the impact of CQ and vice versa. Potential interventions in relation to leadership adaptability should also include training on CQ and in particular how each of the four components of CQ combine in order to encourage better leadership adaptability.

6.2 Limitations of Research

The author recognises that there are limitations to the research presented in this thesis. These limitations cover the ontological and epistemological concerns of what can be considered to be research and knowledge; cover the limitations concerning bias caused by self-selecting participants, and the resulting generalisability and applicability of the research; and cover the limitations of this research presenting a snapshot in time of the current state of play of school leaders in the UAE.

6.2.1 Understanding Reality and Obtaining Knowledge

As with all research, there are limitations to what can be considered to be understanding reality (ontology) and obtaining knowledge (epistemology). All research is subject to these concerns and is indeed limited by them. In an attempt at reducing the effects of the ontological and epistemological concerns inherent in research, this thesis utilised two separate and complimentary research methods covering the ‘interpretivist’ and ‘positivist’ approaches. Many approaches choose either one or the other, and it is considered a strength of this thesis that both have been covered.

The focus group sessions provided the author with a rich qualitative data set of complex subjective meanings of leadership adaptability. This interpretivist approach to discovering knowledge provided a deeper understanding and contextualisation of the ‘how’ and ‘why’ of leadership adaptability than a positivist approach could achieve. However, this approach was time consuming and logistically challenging, for both the participants and the researcher, whom all had to be in the same physical space at the same time in order to participate. The number of people able to participate was small, when compared to the much larger number that completed the questionnaire. Beyond physical constraints, the analysis of the focus group sessions was subjective – the researcher must translate words spoken in the sessions into textualised meanings.

To compensate for the limitations of the interpretivist approach, a questionnaire was developed from the focus group sessions specifically for measuring leadership adaptability, and used alongside existing instruments to collect quantitative data, which was subsequently analysed using statistical techniques. This positivist approach to discovering knowledge provided the researcher with a large data set, with many data points collected per participant. This allowed

for a thorough test of the constructs crucial to this research – CQ, leadership adaptability, and leadership style (MLQ5X) – and for comparisons with other research (for CQ and MLQ5X).

In addition, this approach was more flexible than the interpretivist approach as it allowed participants to complete the questionnaire when and wherever they wanted. The positivist approach is limited however by the lack of contextual information and lack of meaning – the researcher has no understanding of *why* each participant chose each of their responses and treats each one equally. Two participants may respond in the same way to a question, but for very different reasons. This information is not gathered and therefore limits our understanding of these data.

6.2.2 Self-selecting Participants

There are concerns with collecting data only from self-selecting participants leading to self-selection bias. The focus group invitations and questionnaires were sent to all school leaders in the emirate of Abu Dhabi, but participation was optional. Thus, only a self-selected proportion of those invited to attend the focus group sessions, or complete the questionnaire, responded and participated. The participants therefore are considered to be a self-selecting sample of school leaders, drawn from the whole population of school leaders. The reasons for school leaders choosing to participate, or the non-participants' reasons for not participating, are unknown but may be universal across the groups. For example, all participants choosing to complete the questionnaire did so because they may consider themselves to have high CQ and want to recognise this about themselves; or non-participants choosing not to respond because they may consider themselves to have low CQ and don't want to acknowledge this. Because of this potential for bias amongst the sample, caution must be applied when generalising from

the sample of school leaders to the whole population of school leaders, limiting the applicability of the results.

In addition, this study only collected data from the school leaders – labelled as ‘self-raters’. The MLQ5X scale is designed to be used by self-raters as well as a variety of the self-raters’ colleagues; such as subordinates, peers, and superiors. Future research should gather data from self-raters’ subordinates/followers in order to get a greater perspective on their leadership style. Further, non-participants have self-selected to not participate, and without knowledge of the characteristics of these non-participants, the extent of this type of self-selection bias is unknown.

Further, non-participants have self-selected to not participate, and without knowledge of the characteristics of these non-participants, the extent of this type of self-selection bias is unknown.

6.2.3 Common Method Bias

Common method bias (CMB) happens when variations in respondent’s answers are caused by the research instrument rather than the actual predispositions of the respondents that the research instrument is attempting to uncover. The research instrument therefore introduces a bias, and hence a variance, which will be analysed as if it were a predisposed respondent variance rather than an instrument bias. Consequently, any analysis is ‘contaminated’ by the noise which is resulting from the biased instruments.

Testing for common method bias is typically at the dimension reduction stage of analysis, with application of Harman’s single factor test. For objectives 1 & 2, several dimensions were identified, and the loading on the first rotated component is less than 50%, suggesting that common method bias is not present. For objective 3, where the newly developed leadership

adaptability scale is analysed, the loading on the first component is greater than 50%, suggesting the presence of common method bias. However, during discriminant validity testing against objective 3, where the leadership adaptability scale was analysed for underlying dimensions alongside the cultural intelligence scale, loadings on the first rotated factor were ~40%, suggesting that common method bias was not present.

6.2.4 Snapshot

This limitation recognises that the data presented in this thesis is considered to be a snapshot at a particular moment in time. These data, largely made up of attitudinal perspectives, are subject to change in any direction at any point in time. Whilst the methodology is replicable, the results will shift to represent the shift in attitudes of the sample. Indeed, the make-up of the sample will most probably alter, too, also affecting findings.

During the taking of this snapshot of data, it is possible for errors to have been made and for confusion to have been captured (for example, participants not understanding the questionnaire items as expected). Although such incidences are potentially equally likely in a future snapshot, having more data, and a second chance at collecting will provide an opportunity to reduce these instances.

6.2.5 Small Sample Size in Focus Groups

A limitation of the study is the size of the three focus groups, which totalled 14 participants. Although the sessions were valuable and met the objectives with regards to covering the required questions, additional participants would have allowed for further confidence in the results of these sessions. Additional sessions on a different day, and at a different time of the day may have resulted in further focus group participants. Although 14 is a small sample, it is

over 3% of the population of school leaders, which is proportionately high when compared with other focus groups.

6.3 Future Research

A number of directions can be taken with future research that builds from the findings presented in this thesis. These options are presented in this section.

6.3.1 Replicate Study

The study should be replicated, as closely as possible, to provide an additional dataset to compare and contrast the findings with, and to provide further validation of the approach taken in this thesis. The replication should follow the methodology used in this thesis to administer the questionnaire, using the same questionnaire items, and analysing the data using the same statistical techniques. If this provides findings identical to those presented in this thesis, it will validate the approach taken and confirm the reliability of this study.

Replicating the study would also offer an additional ‘snapshot’ of data; not addressing the limitations identified altogether but reducing the concern of this limitation.

6.3.2 Additional Testing

A replication of the approach taken in this thesis will provide additional data for each of the three scales used in this study. Each of these three scales (CQ, MLQ, LA) will benefit from further testing, whether in a study that replicates this one, or in other studies with differing aims and objective, with different individuals, in a different setting.

This is especially true for the Leadership Adaptability scale, which was developed and used for the first time in this thesis. This scale will require extensive testing in different geographical locations, and varying contexts, before it can be considered to be valid in the way that the CQ and MLQ5X scales are.

All three scales require further testing in the UAE, as they have not been used in this combination before in this setting. Further research that uses these scales in the UAE will provide additional datasets and findings which can be compared to those presented in this thesis.

6.3.3 Multi-Factor Leadership Scale (MLQ5X)

Further testing of the dimensionality of the MLQ5X scale is required. The scale has been used in many hundreds of studies across the world, with several thousand participants, but these studies have identified various ranges of dimensions present in the 36-item questionnaire (as was found in this thesis), as well as the commonly accepted and ‘as designed’ nine dimensions. The findings presented here did not match the ‘as designed’ dimensions, despite extensive testing employing a number of different dimension reduction techniques. Further testing might help to explain why this was the case – was it the UAE context, the seniority of the participants, the diverse range of nationalities, using only self-rating scale, or some other factor?

6.3.4 Address Limitations

Future research should look to address the limitations that are recognised in this study.

Regarding the focus groups, carried out at the beginning of the research, the sample size was small. This limitation can be addressed by having a larger sample for the focus groups.

The limitations of the questionnaire are such that there will be a lack of contextual information and an overall lack of meaning as the researcher will have no idea how the respondent choose to answer each question. This limitation could be addressed by carrying out follow up interviews with respondents to gain further and deeper insight into their responses. Although a qualitative approach was used in this study to assist in the development of the Leadership Adaptability scale, it was not used beyond this requirement. Overall, additional qualitative data could provide a deeper meaning and contextualise the quantitative data presented here.

It is suggested that future research should address the uncertainty associated with the common method bias for the leadership adaptability scale. Future studies should address this practical limitation both during dimension reduction tests for the leadership adaptability scale alone, and during any discriminant validity tests where the scale may be used alongside other scale measuring other latent constructs.

In addition, attempts could be made to collect data from those school leaders that did not participate in this study. The total population of school leaders is not overwhelmingly large, 443. Contacting non-respondents, perhaps offering an incentive for participation, may counter the issue of self-selection bias identified. This would have to be managed carefully, in order to remain within ethical guidelines when offering an incentive, and to take account of this potential bias when comparing the first cohort of participants with the second cohort.

Regarding the snap shot nature of this research, this limitation can be overcome by gathering the same information again in order to have more data, to test if respondents change their attitudes over time.

6.4 Final Conclusion

The aim of this study was to understand the relationship between the levels of CQ and the ability to adapt leadership style amongst school leaders in Abu Dhabi Education Sector. The results of the study were based on qualitative focus group findings and results from a quantitative survey. In this chapter, several conclusions and recommendations were presented based on the results that emerged from the data.

This research has successfully highlighted that school leaders in the Emirate of Abu Dhabi have high CQ, demonstrate predominantly transformational leadership style, have high levels of transformational and transactional leadership styles, and show high levels of leadership adaptability. Also established were strong relationships between transformational leadership and CQ, and between CQ and leadership adaptability. These outcomes are highly significant, considering that prior to this research there was no previous empirical evidence to support any of the above, and so adds to the theoretical body of knowledge in this respect.

The UAE educational system is one of the most-understudied public sectors worldwide (Burden-Leahy, 2009; Ridge, 2009). There is limited previous evidence which links CQ, school leadership style, and adaptability, in a UAE context with school leaders. Therefore, the outcomes of this thesis are the first of their kind in this region, and so have provided a baseline from which further studies can hopefully commence in the field of CQ, leadership style, and leadership adaptability.

The implications of these results are encouraging as school leaders in the emirate of Abu Dhabi already have a high level of this critical leadership competency from the outset and are already proficient in dealing with diversity. An explanation for this could be that almost 90% of the population in the UAE are made up from expatriates from over 200 countries. People in the

UAE, whether nationals or expatriates, are therefore very used to dealing with cultural diversity and so this could be the reason why the levels of CQ were high throughout the sample. In order to maintain and build upon these high levels of CQ, educational authorities should ensure that all school leaders have access to CQ training as part of an ongoing professional development program. Also, CQ could be integrated into higher educational curriculums so that future leaders in the UAE have a core CQ and leadership competency. This was the first time that the CQ scale has been implemented in a UAE educational setting and so more research is needed in this field in order to fully validate the results.

The implications of these results to the field of leadership are twofold. Firstly, it is encouraging that school leaders in the emirate of Abu Dhabi are demonstrating predominantly transformational leadership because transformational leadership has been shown in previous studies to be a highly desirable characteristic in an educational setting. The small number of respondents exhibiting laissez-faire leadership style is an interesting outcome as it suggests that school leaders in the emirate of Abu Dhabi are not exhibiting the full range leadership style approach.

The MLQ5X, which was used to measure leadership style, is a well-known scale which has been used around the world numerous times, although its use has been limited in a UAE setting to date. The researcher did encounter some problems with the scale during the course of the research and so it is highly recommended that it be implemented again in the same context to further investigate the results. The onus is also on educational authorities to ensure that school leaders have adequate training in all types of leadership styles and that they utilise the best style in any given setting. This can be achieved by hosting professional development seminars that

focus on making school leaders aware of the different leadership styles they can utilise to achieve the desired result.

The implications of the results of the study to the field of leadership adaptability are now clearer, and it was established that school leaders in Abu Dhabi are highly adaptable. In a globalised world with so many different cultures coming together, it can be argued that there is no 'one-size-fits-all' leadership approach. Instead, leaders must be able to be adaptable in order to lead diverse teams, consisting of a myriad of personalities and cultures, around a common vision. School leaders in the emirate of Abu Dhabi demonstrated transformational leadership, have high CQ and are very adaptable, and so it can be argued that they have all the necessary criteria (based on current academic thinking), to be successful leaders. There was also a strong relationship identified between transformational leadership and CQ, and CQ and leadership adaptability, again reinforcing the fact that all concepts under investigation are interrelated. The development of a new Leadership Adaptability scale is a significant contribution to the theory in this area, albeit this new scale will require much more testing to become established. As with CQ and leadership, leadership adaptability can be learned through professional development programs and so this approach must become more mainstream in the UAE.

The translation of the scale instruments for CQ, MLQ5X and Leadership Adaptability to Arabic is an important contribution, as it opens up these concepts to new audiences in their native language.

Overall, this research has represented an important step in the development of the knowledge base which is necessary if the UAE is going to build a dynamic educational infrastructure that will enable it to compete with other systems around the world, and develop a knowledge based economy. The outcomes from this research indicate that the school leaders are moving in the

right direction. CQ, transformational leadership and leadership adaptability all indicate that school leaders in the UAE are on the right path that will facilitate positive change. It is also up to the educational authorities to consider the bigger picture and ensure its school leaders are equipped with all the necessary skills to enable them to lead their schools to success. An important aspect of these interrelated concepts is that they are all malleable and can be improved upon given the right conditions, motivation and training.

From a personal and more reflective angle, this research has been long overdue in relation to school leaders in Abu Dhabi and their specific practises and abilities in key leadership competencies. As someone who works as a leader within the education sector, I have witnessed at first hand the concepts under investigation in this research and I have personally encountered issues relating to cultural diversity on a daily basis. The fact that there is a tool at our disposal that can help leaders to better handle these situations is very exciting and I fully believe that the application of CQ in the UAE education sector will greatly help school leaders deal with the challenges they face. The synergy between CQ, leadership style and leadership adaptability will ensure school leaders in the UAE have the necessary skills to be able to handle all situations that are characterised by cultural diversity as well as become better leaders. It was very pleasing to see that the results of this investigation were positive and show that school leaders have demonstrated high levels of CQ and leadership adaptability, while also adopting transformational leadership.

It is also appreciated that the results of this thesis are only the beginning, and that extensive research is required to further expand on each and every result presented here. It is hoped that the educational authorities will continue to embrace an ethos of research and development as they work tirelessly to improve educational standards in the UAE.

I also applaud the school leaders in the Emirate of Abu Dhabi who are working very hard to help the UAE reach its potential. They must be given every opportunity available to improve, practice and refine their skills in line with the latest educational thinking but also with the specific and unique UAE context firmly at the centre of all development. They must also be encouraged to partake in educational research, as this will be the driving force behind overall improvement.

Cultural intelligence and leadership style in the education sector

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Abstract

Purpose – Schools in UAE are multicultural in nature. In this context, cultural intelligence (CQ) is a tool, which can increase an individual's ability to interact with people outside his/her culture. The purpose of this paper is to explore the perceptions of the school leaders regarding the key influences of cultural intelligence on their ability to adapt their leadership style in the Abu Dhabi Education Sector.

Design/methodology/approach – An extensive review of the literature was carried out to acknowledge the cultural intelligence and leadership style adaptability concepts. This research has adopted a qualitative method of inquiry. Data for the study have been collected from three focus groups with 14 schools leaders in the Emirate of Abu Dhabi.

Findings – This pilot study reveals that cultural intelligence has some influence on the school leaders' ability to adapt their leadership style within a diverse work environment. This influence is complex in nature and multiple factors have been identified.

Research limitations/implications – The main limitations of this study are associated with the small sample size. Regarding the implications, while this study was conducted in a UAE cultural context, it can be extended to other Gulf countries. Future research should prompt educational leaders, administrators, students, and research academics to further consider the impact of cultural intelligence on leadership style. **Practical implications** – This study contributes towards cultural intelligence literature. Schools should provide cultural training to managers before appointing them to leadership positions, which helps in understanding the culture which they are going to operate in, and effectively manage their drives, workforce, students, and the community.

Originality/value – The paper highlights six core factors that influence the ability of school leaders to adapt their leadership style in culturally diverse environments. These preliminary factors need to be examined further to validate the dimensions of leadership adaptability in various contexts.

Keywords Cultural intelligence, Abu Dhabi, Leadership styles, Cultural, Leadership adaptability, UAE culture, UAE education sector

Paper type Research paper

Introduction

Globalisation is a complex issue with social, political, and economic implications that go beyond individual countries and societies. It has prompted the need for experiences and skills in relation to working in culturally diverse settings as the cultural composition of work teams can have both positive and negative impacts (Ng *et al.*, 2011). Hence, there is a strong demand for leaders who have the necessary skills required to lead culturally diversified teams (Groves and Feyerherm, 2011; Ang *et al.*, 2011).

Cultural intelligence (CQ) is one such construct which is “motivated by the practicality of globalisation in the workplace” and it is a measure of an individual's capability to function and manage effectively in culturally diverse settings (Ang and Van Dyne, 2008). In particular, educational institutions can be considered to be a microcosm of the globalisation that is occurring throughout the world (Keung and Rockinson-Szapkiw, 2013). The Abu Dhabi education sector is culturally diverse and is reflective of the multinational nature of the population. Educational leaders who recognise the importance and value of cultural intelligence (CQ) can benefit from cultural differences by using CQ as a “strategic and competitive tool in order to help them achieve organisational goals” (Mahdi and Elaheh, 2012).



Tying together the concepts of cultural intelligence, leadership, and leadership style adaptability, the ultimate aim of this research paper is to explore how cultural intelligence influences the school leaders' ability to adapt their leadership style in the Abu Dhabi education sector. The first section highlights the background of this research – which is cultural intelligence in an UAE context. The following section reviews the literature surrounding CQ and leadership. Theoretical framework relevant to cultural intelligence and leadership style adaptability has been presented in the subsequent section. The next section presented research and methodological issues adopted for this research. The results of empirical findings and discussion were presented before concluding the paper.

Relevance of cultural intelligence in the UAE context

No matter where a business organisation is located in the world, the work environment is becoming increasingly more diverse. It is also the case that some individuals are more effective than others when working in multicultural environments (Crowne, 2008). Organisations that understand this dynamic often require their workers to have effective communication skills, thereby achieving more positive outcomes in multicultural situations.

The name “Middle East” suggests that Arabia is in the centre of two broad world cultures, at the crossroads of the West (the Americas and Europe) and the East (Asia). The United Arab Emirates is an international business environment and the trend of globalisation is broadening as it becomes the hub for international business in many sectors, most importantly alternative energy, finance, trade, and tourism (Atradius, 2014).

The Abu Dhabi education sector is culturally diverse and is reflective of the multinational nature of the population. The population of the UAE in 2010, as per census estimates, was 7,316,073. Of this number, only 947,997 were UAE Nationals. The rest, nearly 87 per cent are expatriates mainly coming from Asia, UK, USA, and other Arab countries (UAE National Bureau of Statistics, 2010). In 2013, it was estimated by the Minister of Economy that there were approximately 202 different nationalities of people living and working in the UAE (Gulf News, 2013). This has resulted in the interaction of people with diverse language, customs, and ethnic backgrounds. While diversity has been shown to have a number of benefits, including enhanced employee creativity and competence, it can also lead to problems such as miscommunication, dysfunctional adaptation behaviours, and the creation of barriers, thereby reducing the positive aspects that diversity can bring (Al-Jenaibi, 2012).

Abu Dhabi education sector

Education institutions in the Emirate of Abu Dhabi are a prime example of the globalisation that is occurring throughout the world. Indeed, the Abu Dhabi education sector is described in the literature as being “a fascinating case in terms of the globalisation of education” – due to an increase in the meshing of social, economic, and cultural integration within current educational practice and policy (Kirk, 2010). The demographic of students and teachers vary greatly between the private and public sectors and there are various challenges relating to diversity – such as language barriers, cultural and religious differences and gender imbalances. According to the Abu Dhabi Statistics Centre, in 2014, the educational district consisted of 256 public schools (127,698 students) and 188 private schools (223,803 students from different countries) (Tables I and II).

The Abu Dhabi education sector is relatively young as compared to other systems worldwide. Historically, very few countries have experienced the huge shift in income and resulting development that has been experienced in the Abu Dhabi. In less than 40 years, the UAE has developed a public national education system that is similar to what western systems have achieved in over 100 years (Kirk, 2010). As a result, the UAE has had to quickly develop an education system that can withstand the rate of development of the

Appendix 1: Published Paper as a result of the focus group

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country. This has led to the adoption of many foreign models and curriculums, giving the students more choice while also meeting the demand for capacity quickly (Kirk, 2010). However, while this has helped in the short term, the Abu Dhabi education system is now undergoing reform with the ultimate aim of creating an indigenous education model that is more tailored to the diverse needs of the country.

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Review of literature

Cultural intelligence

Cultural intelligence (CQ) is one tool or competence that could help educational leaders deal with diversity in the workplace. The fact that some people can function more effectively than others in a multicultural environment is the driving force behind the development of a concept called cultural intelligence (CQ). Introduced in 2003 by Earley and Ang, CQ was conceived during a time of “unprecedented globalisation and interconnectedness” (Ang *et al.*, 2011). CQ is defined as “a person’s capability to function effectively in intercultural environments” (Ang and Van Dyne, 2008). It refers to a general set of capabilities that help individuals become more effective across different multicultural situations and therefore is not specific to one particular culture or context (Ang *et al.*, 2014). The origins of CQ can be found in Intelligence Theory. Intelligence is defined by Sternberg and Detterman (1986) as the “capability to adapt effectively to the environment”. Earley and Ang (2003) used this idea but extended it so that it would be specific to a cultural context. They also utilised Sternberg and Detterman’s (1986) multiple loci of intelligence theory which proposes that intelligence is related to different loci within the body, such as “biology, cognition, motivation and behaviour” (Ang *et al.*, 2014). “Biology” refers to the interaction between structural and process aspects of the brain (Ang *et al.*, 2014). “Cognition” refers to both cognitive and metacognitive process or, in other words, a person’s perception of their own and others knowledge (Ang *et al.*, 2014). “Motivation” refers to the cognitive processes of drive and choice (Ang *et al.*, 2014) and “behavioural” refers to the range of actions a person uses, such as motor skills, verbal and non-verbal actions (Van Dyne *et al.*, 2012). CQ is, therefore, considered to be a multidimensional concept that includes metacognitive, cognitive, motivational, and behavioural dimensions (Earley and Ang, 2003).

Metacognitive CQ is related to an individual’s consciousness and awareness during interactions with those who have different cultural backgrounds and involves “higher order cognitive processes” (Ang *et al.*, 2011). Cognitive CQ is an individual’s cultural knowledge of

Table I.
Number of schools,
teachers and
students in the
Emirate of Abu Dhabi

Description	Number of schools	Number of teachers	Number of students
Public schools	256	11,288	127,698
Private schools	188	12,283	223,803
Total	444	23,571	351,501

Source: Abu Dhabi Statistics Centre (2014-2015)

Table II.
Nationality of school
teachers in the
Emirate of Abu Dhabi

Description	Number of teachers – public	Number of teachers – private
UAE Nationals	4,234	49
Non- UAE Nationals	7,054	12,234
Total	11,288	12,283

Note: Number of UAE National and non-UAE nationals teachers in both public and private schools in the Emirate of Abu Dhabi
Source: Abu Dhabi Statistics Centre (2014-2015)

norms and practices that exist in different cultural settings (Van Dyne *et al.*, 2009). It includes knowledge about cultural universals and cultural differences and is acquired from education and experiences in different cultural settings (Ang *et al.*, 2011). Motivational CQ is an individual's capability to direct effort and energy towards understanding cultural differences and relies on having intrinsic motivation and an interest in multicultural settings (Van Dyne *et al.*, 2009). Behavioural CQ is an individual's capability to demonstrate suitable verbal and non-verbal actions during interactions in a multicultural setting (Ang *et al.*, 2011).

Outcomes of CQ. The empirical research on CQ has been increasing since its introduction in 2003. From the literature, it is evident that there are a number of individual outcomes that have been linked to cultural intelligence and which have significant relevance to individuals working in culturally diverse environments (Ang *et al.*, 2011).

It has been highlighted that cultural intelligence in general is positively related to enhanced task performance. Moreover, it was found that the metacognitive and behavioural components of cultural intelligence were particularly significant when it came to task performance (Ang *et al.*, 2007; Garza and Egri, 2010; Rose *et al.*, 2010). It has also been demonstrated in the literature that cultural intelligence facilitates the making of effective cultural judgments and decisions (Ang *et al.*, 2007; Mannor, 2008). In particular, metacognitive CQ and cognitive CQ predicted cultural judgement and decision making (Hampden-Tuner and Trompenaars, 2006; Ang *et al.*, 2007; Mannor, 2008). In regard to multicultural team effectiveness, research indicates that high metacognitive, cognitive and behavioural cultural intelligence encourages interpersonal trust in multicultural teams (Moynihan *et al.*, 2006; Gregory *et al.*, 2009; Rockstuhl and Ng, 2008; Ang *et al.*, 2007). In regard to intercultural negotiation, research indicates that culturally intelligent individuals are more likely to be cooperative in nature have high cognitive motivation which results in a more effective negotiation process and ultimately better outcomes (Imai and Gelfand, 2010). In regard to organisational innovation there is a proven link between cognitive and behavioural cultural intelligence and the rate of organisational innovation. Being cognitively culturally intelligent enables individuals to identify the similarities and differences between cultures. This capability can facilitate organisational innovations in a culturally sensitive way (Elenkov and Manev, 2009). Cross-cultural adjustment is also a documented outcome of CQ. It is related to the level of psychological comfort and familiarity an individual has with their new cultural environment (Ang *et al.*, 2014). Studies found in the literature indicate that motivational and behavioural cultural intelligence are both positively related to cross-cultural adjustment (Ang *et al.*, 2007; Dagher, 2010; Ramalu *et al.*, 2010; Templer *et al.*, 2006). There are many other positive outcomes of CQ in the literature and indeed the authors of the concept call for further studies to "increase our understanding of correlates, predictors, consequences, and moderators in the nomological network of CQ" (Ang *et al.*, 2011).

Leadership

A review of the literature shows that extensive efforts have been made to try and describe leadership. However, many researchers are in consensus that leadership is a process, involves influence, occurs in groups, and involves a set of common goals (Northouse, 2013). Therefore, for the purpose of this research, the definition put forward by Northouse (2013) will be utilised. This states, "Leadership is a process whereby an individual influences a group of individuals to achieve a common goal".

Leadership styles and behaviours. Over the past decade, theories of charismatic, transformation, and visionary leadership have dominated much of the practitioner and academic literature on leadership. These theories examine the behaviours of leaders who are able to evoke the confidence and support of their followers, which often leads to exceptional

productivity and satisfaction. Leadership has been theoretically conceptualised in terms of traits, skills, styles, contingency, and situational approaches in the academic literature. Furthermore, the concepts of transactional vs transformational leadership, developed by Burns (1980), and then refined by Bass (1985), is currently the most cited comprehensive theory of leadership that encompasses a range of leadership behaviours (Bass, 1985; Bass and Avolio, 1994; Yukl, 1999). Leadership is conceptualised within behavioural domains that range from no leadership, termed laissez-faire, to transactional leadership, based upon rewards and punishments, to transformational leadership, based upon attributed and behavioural charisma (Bass and Avolio, 1994) (Figure 1).

Bass and Avolio (2003) argued that the rapid and continual pace of change that organisations today must cope with has driven the need for more flexibility and adaptive leadership. Those leaders defined as “adaptive leaders” are those who can operate most effectively in changing environments. They can identify and make sense of the challenges they face, as well as those of their followers, and they are then able to respond appropriately (Bass and Avolio, 2003). This concept is grounded on the idea that adaptive leaders cooperate with their followers to devise innovative solutions to issues, while enabling them to cope with a wider variety of leadership responsibilities (Bass and Avolio, 2003; Bennis, 2001). Both Avolio and Bass (2004) have made clear demarcations between the different leadership styles, but have also noted “that transformational leadership is not a substitute of transactional leadership rather it augments transactional leadership in achieving the goals of the leaders, associate, group and organization”.

The ability of leaders to adapt may be a key way to avoid failure in achieving the outcomes of leadership process. Adaptability or flexibility is an assumed process in many theoretical discussions but is rarely defined and operationalized in research. As a component of overall employee performance, Charbonnier-Voirin and Roussel (2012) view adaptive performance as the ability of an individual to change his or her behaviour to meet the demands of a new environment. The authors call for more studies (qualitative and quantitative) on the notion of adaptability, as the academic research on leadership style adaptability is very limited. They believe that current research and practice (on leadership style adaptability) have been hampered by a general lack of a widely available, psychometrically sound, multidimensional measure of adaptive performance that is applicable across a wide range of job contexts.

CQ and leadership. As CQ is described in the literature as being a critical leadership competency, it is important to investigate the literature on CQ and Leadership.

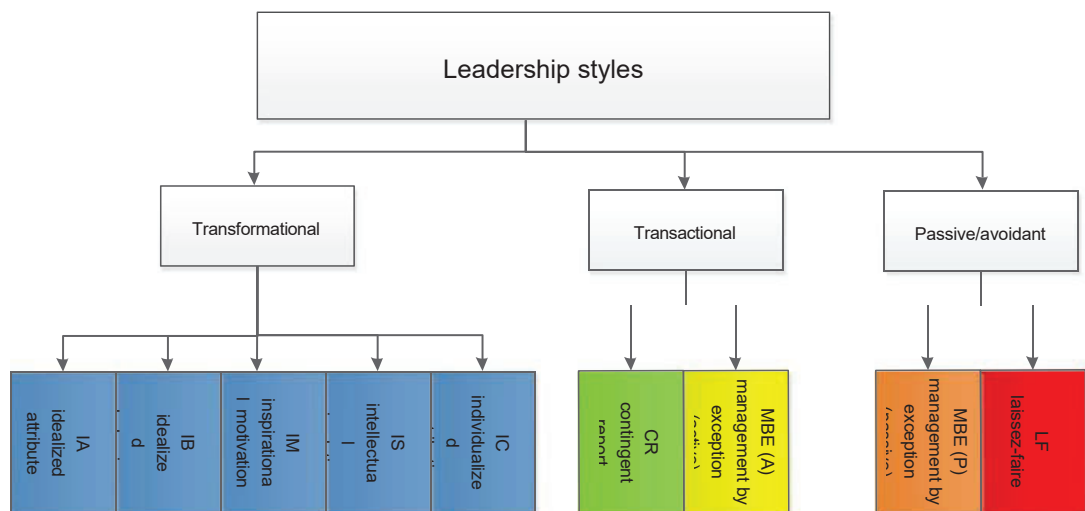


Figure 1.
Avolio and Bass’
(2004) leadership
styles

Livermore (2010) and Mannor (2008) argue that CQ increases leader's abilities to assess culturally diverse work settings. Livermore (2010) goes further to state that leaders with advanced capabilities in CQ greatly contribute to leadership effectiveness and performance outcomes in culturally diverse teams.

There are a few studies in the literature that have investigated CQ and leadership using both the qualitative and quantitative aspects. An important study carried out by Groves and Feyerherm (2011) concluded that CQ was positively related to leadership performance in situations of high staff diversity while CQ was unrelated to leadership performance when the situation was less diverse. Another study by Rockstuhl *et al.* (2011) also demonstrated that CQ predicted cross-border (working in different countries) leadership effectiveness as opposed to just general leadership effectiveness. This strengthens the argument that CQ is a unique intercultural capability. A study by Dean (2007) found that global leaders utilise metacognitive CQ in all their leadership processes. A further study carried out by Deng and Gibson (2008) also demonstrated that motivational CQ is an essential component for cross-cultural leadership effectiveness (Ang *et al.*, 2011). In terms of the effect of CQ on leadership styles, a study by Elenkov and Manev (2009) highlighted that CQ "magnified the effects of visionary transformational leadership".

This study is not focused on measuring leadership effectiveness, but there is sufficient argument in the literature to suggest that CQ is positively related to leadership effectiveness and the inference for the purposes of this study is that it is an important leadership attribute.

CQ and educational leadership. The challenges faced by twenty-first century educational leaders are different from the past. Increased diversity of students within educational institutions indicates that leaders need to have cultural intelligence in addition to global awareness (Thomas, 2006). There are limited studies in the literature that address the nature of the relationship between CQ and educational leadership. One study, carried out by Mahdi and Elaheh (2012) investigated the relationship between cultural intelligence and the transformational leadership style of primary school principals within Torbat-e- Heydaryeh in Iran. The statistical population of the research was all of the principals in Torbat-e- Heydaryeh, and the subsidiary statistical population was all of the deputies and teachers of primary schools in Torbat-e- Heydaryeh. Consequently, 27 male managers and 23 female managers were randomly selected from the main statistical population (totalling 50 managers) utilising the whole numbering method, while 235 people were selected from the population of deputies and teachers. This study concluded that there was a positive relationship between CQ and the transformational leadership style. The authors go on to argue that in ethnically diverse educational institutions, it is essential that a leader has an effective leadership style and this leadership style can be greatly supported by CQ. One limitation of this study is that it did not mention in detail the extent of diversity faced by the school leaders in Torbat-e- Heydaryeh and so parallels could not be drawn between the level of diversity and the CQ levels. This paper was useful as it was the only paper found that was similar to this proposed study in terms of the school principal setting and investigating the effect of CQ and leadership style.

In a recent study by Keung and Rockinson-Szapkiw (2013), which looked at international school leaders, it was found that there is a significant positive relationship between cultural intelligence and transformational leadership. They concluded that school leaders who have a higher level of cultural intelligence exhibit a higher level of transformational leadership style, which suggests that individuals with high-cultural intelligence are able to lead and to manage more effectively in multicultural environments. Behavioural cultural intelligence and cognitive cultural intelligence were found to be the best predictors of transformational leadership.

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Theoretical framework
Cultural intelligence and leadership style adaptability
Adaptive leadership was defined by Heifetz (2004) as the capacity to lead during difficult circumstances that necessitate a battle for survival in an environment that is shifting and changing. Leadership itself has been explained as the “activity of mobilising people to tackle the toughest problems and do the adaptive work necessary to achieve progress” (Heifetz and Linsky, 2004).

Research has shown that there is positive relationship between adaptive leadership and cultural intelligence. In the CQ literature, Ang *et al.* (2007) concluded that individuals with high levels of metacognitive CQ and behavioural CQ are better able to understand situations characterised by diversity and therefore display the appropriate behaviours. This can be explained by the fact that individuals with high metacognitive CQ are more aware of the environment that they are in and individuals with high levels of behavioural CQ are able to adapt their behaviour to fit the cultural situation. Similarly, motivational and behavioural CQ is positively related to job performance (Ng *et al.*, 2012; Kumar *et al.*, 2008). Individuals with high levels of behavioural CQ will generally be better able to meet the expectations of others through moderating both their verbal and non-verbal behaviours (Kumar *et al.*, 2008). As a result, misunderstandings should be reduced and their own ability to adapt ought to be higher. These people will, therefore, be able to understand and interact with people from very different cultures.

Individuals possessing high levels of CQ have the capacity to gather and manipulate information, draw conclusions from it, and then react to the cultural cues of their host region with appropriate cognitive, emotional or behavioural actions (Earley and Ang, 2003). These intercultural competencies are also expected to enhance adaptability and minimise miscommunications of role expectations. CQ has a direct bearing on this adaptability as it helps individuals to adapt and adjust more straightforwardly to a host environment (Earley and Ang, 2003). Conversely, a negative relationship between behavioural and leadership adaptability is more likely to be observed where a leader resorts to mimicry, rather than utilising adaptive behaviours that are appropriate for different cultural settings. A culturally intelligent leader will demonstrate flexible behaviour that will help them adjust to any cross-cultural environment. The knowledge component of this is cognitive CQ, which positively relates to all the dimensions of adaptability. A leader with high cognitive CQ will be capable of identifying clues and insights about a culture, and using these observations to form an appropriate response. Leaders high in cultural intelligence are better able to adjust and adapt their leadership style in the host culture environment. Therefore, we can conclude that the characteristics of a culturally intelligent educational leader include: being able to better manage and minimise miscommunication, being able to adapt more straightforwardly to a host environment; being able to adjust their leadership style in the host culture environment, and being able to manage effectively in a diverse work environment.

Based on above arguments in the literature, this study aims to answer the below research question:

RQ1. What are the perceptions of the school leaders regarding the key influences of Cultural intelligence on their ability to adapt their leadership style?

Research design and methodology

Sample design and data collection

Garcia and Gluesing (2013) argue that the way a researcher constructs the data collection has potential implications on the way in which the data is analysed. Specifically, qualitative data should allow for a theory to emerge. Furthermore, the research project can achieve its

set objectives through effective analyses of the data collected. Krueger and Casey (2009) suggest that analysis of the data has to be “practical, systematic and verifiable”. The objective of this part of the research was to explore how cultural intelligence influences the school leaders’ ability to adapt their leadership style in the Abu Dhabi education sector. Therefore, the exploratory nature of the focus group technique calls for analysis of qualitative data collected through this medium, which requires categorisation prior to analysis (Saunders *et al.*, 2012).

To obtain “new insights” (Robson, 2002), focus groups were chosen as the most appropriate method for understanding people and for extracting meanings in relation to the concepts under investigation. This method enabled the researcher to see and listen to what people think about leadership and cultural intelligence and adaptability, and how these concepts get utilised within an Abu Dhabi school setting. The focus group was used to identify how cultural intelligence influences the school leaders’ ability to adapt their leadership style in the Abu Dhabi education sector.

In case of this research, the whole population of school leaders in Abu Dhabi was offered an opportunity to self-select themselves to participate in focus group discussion on a particular date. The questions for the semi-structured focus groups were developed from a literature review on the subject of leadership, and particularly on the notion of adaptability, as well as the literature on cultural intelligence. The main aim of the focus group discussions were to convene a broad sample of school principals from both public and private schools in Abu Dhabi, and to facilitate an informal debate relating to the concepts of leadership, adaptability, and cultural intelligence. Particular emphasis was placed on how the school principals felt that these concepts of leadership, adaptability, and cultural intelligence relate to one another from a practical point of view and in a multicultural situation.

Participants were asked to share their experiences in dealing with cultural situations. Open-ended questions were used: “What kind of challenges does cultural diversity among stakeholders create for you as leaders? In your experience, do leaders adapt their leadership style in the multicultural Educational Sector? Give examples. Describe an experience where you have encountered a conflict or challenging leadership situation as a result of cultural differences among stakeholders. Describe the actions you took in order to resolve this situation? Think of a time when you had the same situation/experience with two culturally different stakeholders. Did you handle both situations in a similar way or did you have to change your behaviour and actions in order to resolve each situation? Give reasons for your answers”.

Three focus group meetings were held in total: one with only private school leaders, another with only public school leaders, and finally a group with a mix of private and public school participants. The participant information is shown in Table III.

Focus groups details

Data were recorded using a digital audio recorder, and then discussion of each focus group discussion was transcribed. Subsequently, field notes were manually coded using the content analysis technique, and then re-coded having listened to the full recording. To ensure the reliability of the data, one has to be aware of the threats to reliability. The focus group discussions were facilitated in such a way that the discussion was directed very closely towards the set questions. Each group was also kept small in terms of the number of participants and so it was possible to control any bias due to their being dominant individuals in the group (Robson, 2011) (Table IV).

Regarding the coding of the focus groups, there are a number of approaches that could have been adopted within this research to analyse the data collected through the three focus groups. The researcher adopted traditional manual coding of the textual data, with each paragraph in the typed extended field notes being identified as a unit of analysis. Individual or multiple codes have been attached to each paragraph, which were derived from the

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Table III.
The three focus group participant demographic information

Name	Institution	Private /public	National /expat/years of experience	Principle/deputy	Gender	Rural/city
Participant 1	Institution 1	Public	Expat/15+	Principal	Female	Rural
Participant 2	Institution 2	Public	Expat/10+	Deputy	Female	Rural
Participant 3	Institution 3	Public	Expat/20+	Deputy	Female	Rural
Participant 4	Institution 4	Public	Expat/15+	Principal	Female	City
Participant 5	Institution 5	Private	National/10+	Principal	Female	City
Participant 6	Institution 6	Private	Expat/10+	Principal	Female	City
Participant 7	Institution 7	Private	Expat/20 +	Principal	Female	City
Participant 8	Institution 8	Public	Expat/15+	Deputy	Male	City
Participant 9	Institution 9	Private	Expat/10+	Principal	Male	City
Participant 10	Institution 10	Public	National/15+	Principal	Male	City
Participant 11	Institution 11	Public	Expat/15+	Principal	Male	Rural
Participant 12	Institution 12	Private	Expat/15+	Principal	Female	City
Participant 13	Institution 13	Private	Expat/10+	Principal	Female	City
Participant 14	Institution 14	Public	National/15+	Deputy	Female	Rural

Table IV.
Focus groups duration, number of participant and type schools

	Focus group 1	Focus group 2	Focus group 3
Duration	1 hour 6 minutes	1 hour 19 minutes	58 minutes
Number of participants	4	5	5
Type of school represented	Public	Private	Mix of public and private schools

secondary literature on the subjects of leadership and cultural intelligence. Through various interactions of this step, the researcher has gone through the three transcripts of the focus groups. The researcher then conducted initial searches for similarities and differences that emerged within and across the focus group transcripts, and the themes assigned to similar codes enabled the development of higher level codes, with various dimensions as sub-codes forming core themes.

To ensure the validity and reliability of the data analysis, the theoretical themes emerging from the data were cross-checked by means of coding a selection of data by the researcher and an additional two individuals familiar with content analysis. The two individuals were briefed on the objectives of the study by the main researcher. There were no particular discrepancies identified through the inter-coder reliability cheques, and hence the coding undertaken by the main researcher was deemed as acceptable.

Results

The section below presents the findings from the three focus groups:

Findings from focus group 1 – private schools only

The first core dimension discussed by this group is “adaptability and flexibility”, supported by the following quote: “There is no doubt that, as a leader, the higher your level of cultural intelligence, the more you will be flexible, adaptable, and be able to correlate and bring out the positive things among your staff”. Exploring the notion of “flexibility”, the focus group had a lengthy discussion about “flexibility of thinking”, which stems from the fact that it “depends on the person and personality, and that flexibility of thought is key. Being a transformational leader requires a high level of cognitive functioning, which results in the flexibility of thinking”. Additionally, the notion of “tolerance for other cultures” was discussed at length, specifically in the context of the UAE as a country that accepts

expatriates from various cultures, resulting in higher levels of diversity amongst the workforce. Furthermore, “receptivity” towards other cultures emerged from this focus group, specifically in relation to “the UAE, which values its own culture and is open to accepting other people’s cultures”. However, this level of receptivity may be different for different types of leaders, and arguably the level of “acceptance of” or “awareness towards” other cultures is important for culture to play a role in organisations.

Learning the Arabic language has not been found to be a pre-requisite to successful adaptation in the UAE context, as participants discuss that “in the UAE people can survive and adapt without language”. This became an interesting dimension, as language is an important element of CQ. Hence, the “non-importance (or Relevance) of language” for adaptability in relation to the ability to speak Arabic was another important theme that emerged from the data. This could be explained by the diversity of the UAE population and also highlights the great importance of English as a universal language. Much of the discussion was spent on “expectations of behaviour” from others with various specific dimensions: “high tolerance for ambiguity”, “openness”, and “respect”, which represent the UAE dimensions of CQ.

Hence, the core themes emerging from focus group 1 are as follows: “flexibility of thinking”, “receptivity of other cultures”, “expectations of behaviour” and “non-importance of language”.

Findings from focus group 2 – public schools only

One of the first things discussed by the Public School leaders was the “geographical location”. One school leader argued, “Our area (the Western Region) is different to the Abu Dhabi City and Al Ain City. Our area is very Bedouin and so the parents are different. Some parents still believe school is optional. There are problems with behaviour and homework compliance.”

At the outset, a lot of issues were raised in relation to the schools’ governing body – Abu Dhabi Education Council (ADEC) – which has been created as an “institutional environment” and has an influence on the leadership style utilised within the schools. One participant argued “having ADEC at the top tier, a lot of improvements cannot be put into practice. Some leaders have to go backwards and not forward due to this. As leaders, how much are you going to follow the ADEC guidelines? Are we going to modify our schools to fit our school needs or ADEC’s needs, as there is usually a gap?”

This group also had a discussion about the diversity of leadership styles, and explored the stereotypical “flexibility” of Western colleagues, and predominant “rigidity” of the Arab leaders. Furthermore, the discussion led to an understanding that “consistency” in leadership is important, but so is “flexibility” and the ability to find a “compromise” with various stakeholders. Being “flexible and adaptable” in understanding culture helps communicate to various stakeholders. Part of the discussion touched on the issue of language (or lack of), particularly “communication” with parents who may not speak English. This issue was explored through various lenses, including when this creates problems for leaders themselves when, due to language barriers, they have to sort out issues related to misunderstandings between children, parents and staff. Another issue was “flexibility and adaptability”. For example, one school leader argued “I had to adapt as a leader in terms of my assumptions as to what people know and understand and also in the way I communicate, I had to explain even things that for me would be obvious such as why we have parent teacher meetings and why the parents should attend. It took me a long time but that’s what I had to do. I had to change my style definitely.” Another school leader stated “Communication skills are problematic, teaching the parents English was also important at my school and improved the communication channels. Many parents came and enjoyed it.”

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Looking at the core themes that emerged from the data, a lot of the discussion resonated the issues of “flexibility”, “adaptability”, and “communication/language”. However, a very important new core theme related to “the influence of the institutional environment” emerged that shapes leadership in public schools in the UAE.

Hence the core themes emerging from focus group 2 can be summarised as: “flexibility and adaptability”, “influence of the institutional environment”, “rigidity vs flexibility in leadership styles” and “communication problems”.

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Findings from focus group 3 – a mix of private and public schools

The third focus group, with a mix of participants from public and private schools, raised similar concerns and discussed similar issues in relation to leadership and cultural intelligence in the UAE context. The notion of the influence of ADEC, the “regulatory body”, on schools – and the leaders of schools – was discussed throughout, and a lot of the discussion was centred on the fact that a “geographical location” creates a “set of behaviours” people have to follow within the country context. The discussion also involved talking about some new dimensions of “adaptability” to the fore, i.e. “being sensitive” and “behaving per expectations of others”, as one participant stated, “The Key thing is to be sensitive and realise how precious people’s culture is. Think about the bigger picture, there are many things that I could say that could cause problems. We have to be sensitive. There are expectations as to how you behave, address people”.

Furthermore, the focus group concluded the discussion on the subject of leaders being able to “accept change”, which again links in with the notion of “adaptability”. One school leader stated “adaptation is very important for leaders in different cultures. What about personal skills and adaptation? Training will make you more self-confident. When you are insecure about your own self then you will close off and so will not adapt. Cultural training will make you accepting to change”.

There are similarities between the themes that emerged from focus group 3 (mixed group), and previous focus groups. Hence, the core themes emerging from focus group 3 are: “adaptability”, “learning to be a leader through cultural experiences”, “influence of the geographical location”, “leader’s behaviour patterns and expectations” and “strategies of coping with diversity”.

Key factors of leadership adaptability

During the focus group discussion, a number of themes were found to be more pertinent than others. These resonated with the practice of leadership style, and mainly the influence of CQ on their leadership style adaptability in the education sector. The core themes that were uncovered as a result of three focus group discussions are presented in Table V.

Discussion

The present research identifies a number of key factors that underpin the adaptability of leadership in a multicultural context. Some of these dimensions are inherent in leaders themselves (i.e. personal characteristics of leaders, language and communication ability) and behaviours which they exhibit (flexibility and adaptability, their use of cultural strategies). Other factors are more context driven, as context imposes rules and behaviours on leaders (expectations of leader behaviour and influence of institutional environment).

The results of this research support the findings of Ang and Inkpen (2008), who similarly concluded that cultural intelligence is a critical leadership competency in a multicultural environment. This was further corroborated by Deng and Gibson (2009), where it was found

Table V.
The focus group results – core themes

<u>“Leadership adaptability” factors – core categories and sub-categories</u>	
<i>Expectations of leaders’ behaviour</i>	<i>Use of cultural strategies</i>
Sensitivity Ability to adapt Behaving per other’s expectations Consistency	Managing stakeholder expectations Learning to be a leader through cultural experiences Shadowing Emirati leaders with Western leaders Seeking compromise
<i>Personal characteristics of leaders</i>	<i>Language/communication</i>
Openness Respect Being Sensitive Receptive High acceptance of ambiguity Flexibility vs rigidity of character	Speaking Arabic Speaking English Lack of language skills of the leader Lack of language skills of stakeholders Non-importance of language
<i>Flexibility and adaptability</i>	<i>Influence of institutional environment</i>
Flexibility of thought Tolerance for other cultures Receptivity of other cultures Acceptance of other cultures Awareness of other cultures	Geographical location Differences in leadership styles required and enforced Influence of ADEC on schools Frequency and level of changes imposed by ADEC on schools

that cultural intelligence was a crucial competency for effective leaders in a cross-cultural role. Dagher (2010) also argues that a leader who has rapidly adjusted to a multicultural environment will be better placed to adapt their leadership style, whereas an individual who has not adapted could need to devote greater cognitive resources to adaptation, leaving fewer to focus on leadership style.

Theoretical implications

The present research has established the relative importance of cultural intelligence in school leaders through drawing a link with more classical constructs of leadership styles. Of course, the existing literature base for leadership styles is comparatively vast (Gardner *et al.*, 2010; Wang *et al.*, 2011). Nevertheless, this study adds to our understanding of the capacity of school leaders to effectively adapt their leadership style.

Practical implications

The practical implications of this research are important given that it has identified many factors which the school leaders themselves indicate affect their success in leading in a culturally diverse environment. The fact that different factors were identified across both the public and private sectors highlights that there are specific challenges which exist in both sectors in relation to the handling of cultural diversity. Given that cultural intelligence influences a leader’s ability to adapt their leadership style, it necessarily follows that cultural intelligence should be a focus in both the selection, and the training and development, of international school leaders (Templer *et al.*, 2006; Van Woerkom and de Reuver, 2009). Would all school leaders in Abu Dhabi benefit from cultural intelligence training, prior to starting their job or at some point/s throughout their employment? Perhaps, an assessment of cultural intelligence should be a component of the selection process while hiring school leaders? The cultural Intelligence scale (CQS) developed by Ang *et al.* (2004), is a 20 item, 4 factor, fully validated and respected instrument, that can easily be administered to assess baseline CQ levels. Specific feedback can also be generated on the areas of behavioural, motivational, cognitive, and metacognitive CQ abilities.

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This would, in addition, ideally take into consideration technical competence, knowledge of the job, and interpersonal skills. However, it should be noted – by both leaders and those selecting future leaders – that the absence of the interpersonal competence needed for a cross-cultural assignment could be rectified by training (Ang *et al.*, 2014). So CQ is a competency that can be learned and developed by any leader through adequate training. While a leader may have a low CQ score, it is reassuring to know that this capability can be developed. However, it is important to measure the baseline CQ level so that any gaps can be identified and a personal development plan created for each school principal.

With cultural intelligence, it is important to develop a broad framework of understanding, skills, and behaviours, aimed at engaging with a culturally diverse working world. This is in preference to focusing only on specific knowledge or behaviours of a particular country or local culture (Earley and Ang, 2003; Livermore, 2010). Therefore, it can be seen that the results of the present study support the assertion that current training be expanded to all four factors of cultural intelligence.

Limitations

This study, in common with every other research study, is subject to some limitations. In the present case, a central obvious limitation is the relatively small size of the sample which created some constraints on the generalisation of the results produced in the analysis. It does not represent the views of all school principals and stakeholders in both the public and private school sectors and so this will also limit its reach. Furthermore, the limited scope of the study – solely on the emirate of Abu Dhabi in the United Arab Emirates – raises some concerns about how representative the population is. This study can be considered to be a pilot study and so any conclusions drawn must be used with caution.

Future study direction

It is recommended that future studies should increase the sample size to make sure that a more representative population is investigated. They should also seek to include a greater number of schools from across the entire country to improve overall understanding.

The next logical step would be to conduct a quantitative study using questionnaires methods to further investigate the perceptions of the school leaders regarding the key influences of cultural intelligence on their ability to adapt their leadership style in the Abu Dhabi education sector. This could be carried out from both the leader and follower perspective.

The application of more objective methods (e.g. peer assessments, direct observations, or 360-degree assessments) could also be utilised in the future to help provide converging evidence with the findings of the present pilot research. Future studies could also benefit from examining traits other than leadership skills that have an influence on cultural intelligence (CQ) – for example, teaching skills or the ability to speak multiple languages might also show a relationship to CQ. It is highly recommended that these fields are explored further.

Conclusion

This pilot research has set out to explore the factors influencing the school leader's ability to adapt their leadership style in a multicultural context. Abu Dhabi school leaders' adaptability to different cultural environments has been influenced by six factors identified in this paper, some of which are specific to leaders' characteristics and practice and others driven by the context in which leadership takes place. This pilot research proposes that cultural intelligence could be an important tool to use during the selection, training, and professional development of these educational leaders.

Educational leadership research has, over time, lacked longevity of research foci (Leithwood and Jantzi, 2005), which leaves a significant area for future study. It is observed that leadership style created a seismic shift in the concept of leadership, and consequently created a dramatic shift in the field of leadership studies (Antonakis *et al.*, 2003; Bass, 1993; Hunt, 1999). Cultural intelligence, as a construct, has the potential to affect a similar transformation in the field of intercultural competency.

Kelley (1927) stated that cultural competence, as an area of study, suffered from being a “jingle and jangle fallacy”. That is, that constructs are labelled in similar ways, but are very different concepts; while others, conversely, have comparatively similar meanings but are labelled differently (Gelfand *et al.*, 2008). It does, however, present distinctive positive attributes. While still a relatively new concept, it offers theoretical synthesis and coherence, and theoretical precision; it also identifies where cultural competencies are absent, and can link research between different disciplines (Ang *et al.*, 2007; Gelfand *et al.*, 2008).

Naturally, further empirical studies are still necessary to increase the weight of research on cultural intelligence to the impressive levels of that on leadership styles. That being the case, the present pilot research should prompt educational and general managers, administrators, students, and research academics to further consider the impact of cultural intelligence on their ability to adapt their leadership style.

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Appendix 2

Challenges of Globalisation on Leadership and Culture in Organizations

Today's business leaders must operate in an environment of constant change. We now live and work in a time when technological advances have made the world a smaller place, and where 'globalisation' drives the economy. Individuals, businesses, even countries, must now collaborate in a worldwide process that influences global trade, investment and growth.

Janssen et al. (2008) define this 'globalisation' as the "increasing transnational exchange of goods, people and ideas" (p.720), while Aurifeille et al., (2002) argue that globalisation has, at its heart, a standard combination of behaviours that are associated with a particular population. The consequence of this transnational mixture is, as Caligiuri (2006) suggests, a "more complex and dynamic environment" in which businesses must "learn to compete" to achieve "sustainable growth" (p. 219).

Organisations no longer require an on-the-ground presence in multiple countries to be considered a global business. Supported by information technology, a company can be exposed to the world's markets through channels such as their employees, their suppliers, and their partners.

While this presents many opportunities, the nature of globalisation also creates new challenges for every organisation. Prewitt, Weil and McClure (2011) state that "globalisation has seemingly overwhelmed many organisations and leaders because of the rapid pace and lack of training many leaders have had on dealing with and understanding the various communities across the globe" (p. 13). Bishop (2013) underlines this concept, pointing to the great complexity of globalisation and to a lack of real understanding of what demands this global operating environment can place on business leaders.

Evans, Pucik, and Barsoux (2002) consider the acceleration of the globalisation process and the consequent effect it has had on organisations. They assert that globalisation was once viewed as a staged and predictable pathway, whereas many business now find themselves “born global”. This means that they will immediately find themselves operating within a fluid business landscape, where leaders must navigate complexity and ambiguity to form a new mindset and develop fresh skills that can enable success (Sprietzer, McCall and Mahoney, 1997; McCall, 1998; Caligiuri and DiSanto, 2001).

Balancing the integration of a global business and the need to adapt to local requirements is a continuous but gradual process (Michael, 2012). It has been demonstrated that motivation can be increased through the adaption of communication and interaction (Pera, 2013) between workers. This means that multinational corporations must investigate and understand the institutional environment of host countries, and then make adjustments that ensure the full motivation of local staff.

The constantly changing nature of the business landscape also impacts on an organisation’s learning culture. For leaders, this is particularly crucial as global leaders must be habitual learners, viewing their international leadership through the lens of constant learning and sharing knowledge. This is essential, as knowledge of the business environment leads to an acute formulation and implementation of the change within organisations (Cseh, Davis and Khilji, 2013). The global mindset this creates – balancing self-confidence with humility and generosity - is frequently linked to the mindset required within a global business to make critical strategic business decisions (Khaledi and Darayseh, 2013).

Appendix 3

The United Arab Emirates (UAE) - Political Context

The United Arab Emirates (UAE) is described as being a constitutional federation of seven emirates, Abu Dhabi, Dubai, Sharjah, Ajman, Umm al-Qaiwain, Ras al-Khaimah and Fujairah. It was formally established on 2nd December 1971 (Abu Dhabi Chamber, 2014).

The UAE commenced its modernization under the leadership of the late His Highness Sheikh Zayed bin Sultan Al Nahyan. In 1946, at the age of 28, the highly respected Sheikh Zayed began his political career and began to develop his skill for governance his first role being the Ruler's Representative in the city of Al Ain. From the outset, he demonstrated great vision by introducing a number of socio-economic developments which included the opening of the first modern school, commercial market, hospital, road network, and water irrigation system for cultivation purposes.

Sheikh Zayed was a charismatic and well liked leader and soon gained the respect, admiration and support of all tribes by demonstrating strong negotiation skills and deft handling of tribal disputes. He worked diligently to settle tribal differences. As a result of his innate ability as a leader and great foresight Sheikh Zayed was installed as the Ruler of the Emirate of Abu Dhabi on August 6, 1966. At this time, he was also leading the negotiations with the other rulers of the Trucial states and it was he who was instrumental in the formation of the new federation of the United Arab Emirates. His Highness Sheikh Zayed bin Sultan Al Nahyan was formally inaugurated as President of the newly formed United Arab Emirates on the 2nd of December 1971. He held that position for over 33 years until his passing in 2004.

During Sheikh Zayed's first year as leader, he initiated many large infrastructure projects which included the first port and airport in Abu Dhabi. While he was working for the greater good of Abu Dhabi he also had an eye on the International Arena and he soon recognized the need for the UAE to seek opportunities of mutual cooperation in order to acquire the knowledge, experience and resources to further its development. As a result of his diplomatic ability, the UAE joined several international bodies such as the Organization of the Petroleum Exporting Countries (OPEC) in 1967, UNESCO, United Nations, and the Arab League in 1972 (UAE Education system report, 2013).

Undoubtedly, the most significant milestone in the history of the modernization the UAE and indeed the entire Arabian region was the discovery of oil in Iraq in 1927. At time, IPC, who monopolized all oil exploration and production in Iraq, was a key player in the exploration and subsequent discovery of oil in the UAE (Environment Agency Abu Dhabi). While the onset of WWII interrupted the quest for oil, drilling resumed after 1946. There were several years of disappointment as the search for commercial oil reservoirs continued. It wasn't until December 1963 that the hard work and dedication paid off with the first barrels of oil setting sail from Abu Dhabi. This achievement helped to set the UAE on course to being viewed as an international player in terms of oil production. Indeed the UAE is well known today for its oil production and this is evident in the fact that 30% of the GDP is derived from oil and gas output (OPEC Annual Statistical Bulletin 2018).

The UAE Government has also taken full advantage of the country's location at the crossroads of trade between East and West. That it has emerged as a major international trading hub is no surprise, with foreign trade being viewed as a critical catalyst for socioeconomic growth.

This commitment to international trade – together with its consequent obligations – saw it become a contracting party to the General Agreement on Tariffs and Trade (GATT) in 1994, and later take membership of the World Trade Organisation (WTO) in April 1996. The second, in particular, was an important step in enhancing the UAE’s international reputation for trade. The country has clearly and consistently aimed to strengthen its open economy by putting regulations and policies in place that promote international trade and ensure a competitive environment.

The WTO, for example, found that the UAE’s tariff of 5% is considerably lower than the 15% tariff allowed under international trade regulations. Moreover, when the UAE is compared with economies of a similar scale, it typically charges lower rates than those charged by others. The country also managed to record a 98% increase in exports compared to a 133% rise in imports between 1995 and 2004. This was without the UAE resorting to any WTO-consistent trade remedy laws, such as invoking antidumping or countervailing duty against a trading partner (UAE Ministry of Economy).

The UAE’s policy of export diversification has also meant that less than half of its export value comes directly from its obvious oil and gas products. Such a policy has been substantially supported by the introduction of the country’s ‘Free Trade Zones’. These are designated geographical areas within the UAE that are exempted from the country’s traditional laws and regulations concerning licensing, agency requirements, and UAE-majority ownership. This has helped to create dynamic and forward-looking business environments that are particularly conducive to consistent growth.

The UAE has also been proactive in negotiating bilateral trade agreements alongside the other GCC nations. These include with the European Union (as a single bloc), the United States, China, Australia and Turkey. Such agreements have served to reinforce the country's global importance for trade; a fact underscored by comments from a number of important international organisations (UAE Ministry of Economy). The International Bank of Reconstruction and The World Bank, alongside many others, have praised the UAE's leaders for their successful creation of an open business environment that promotes sustainable levels of growth. The country was lauded, in particular, for efforts to streamline document preparation, reduce time to trade, and driving down transaction costs (Gulf Business, 2013).

A philosophy of economic openness and positive trade relations has seen the UAE establish a position as a regional pioneer, raising support from neighbouring Arab countries to establish the Arab Free Trade Zone Agreement. This has been supplemented by at least a further 115 agreements that the country has made to avoid double taxation, a move that further bolsters its renown as a quality foreign investment destination. (UAE Ministry of Finance, 2018) This has been supplemented by large-scale investments in advanced air, land and sea infrastructure that has, in turn, fuelled the growth of related sectors such as tourism and manufacturing.

This plethora of trade agreements prompted the UAE to launch the trade relations map, an important summary of key data, statistics and trade information related to the country's trading relationships with different countries. This has helped to reinforce many of the strategic alliances it has established across the world, openly demonstrating the full extent of commitments it has with different trading partners.

As well as these agreements, the UAE's Ministry of Foreign Trade has also been proactive in establishing physical trade offices in different countries across the world, further extending the country's geographical reach. It has undertaken numerous trade missions abroad, and has organised the participation of UAE companies at international trade exhibitions – showcasing the full range of Emirati ingenuity, creativity and excellence in many sectors.

In 2010, the Ministry issued the UAE Trade Policy Review Report, which details the status of UAE trade policies within the wider framework of implementing the visions, goals, objectives and aspirations of the government. This endeavour was particularly successful at encouraging constructive cooperation between all economic entities in the UAE, encouraging the country to issue a subsequent report that was based on the WTO's second review of UAE trade policy (Gulf Business, 2013). As a consequence of this process, the ICC Open Markets Index 2013 ranked the UAE at 7 in the world for the openness of its market (ICC Open Markets Index 2013).

The UAE's trade policy has been consistent with its obligations as a member of the WTO. Its open and competitive trade policy has made it an extremely attractive trade partner and investment location for countries, businesses and individuals around the world. This has been a key driver of the country's growth to date, and is set to continue playing a significant role as the UAE looks to its future (UAE Ministry of Economy).

Appendix 4

Education Sector, Challenges and Budget

4.1 Education System Improvement

The UAE is currently undergoing huge educational reform. Educational bodies have been working closely with UNESCO in order to fulfil the requirements stipulated in their ‘Education for All’ mandate established in 1990. This involved representatives from over 155 countries agreeing on plans to improve many aspects of educational provision such as “*universal access to primary education, achieving better gender equality, improving the quality of education provision, reducing adult illiteracy, and providing early childhood care*” (UNESCO). In 2010, these countries met again in order to reaffirm their commitment to promoting educational access to all by the year 2015 (The UAE Education System Report, 2012).

It appears that in the UAE case these efforts are proving successful, as recent reports have indicated that the adult literacy rate has increased in the period 1984-94 to 2015 from 72% to 93% (Statistics Centre – Abu Dhabi (SCAD), 2018).

4.1.1 Secondary School Assessment

More efforts are required to improve the quality of education in the public schools in order to bring them in line with international standards. However, Programme for International Student Assessment (PISA) testing carried out in Dubai and Abu Dhabi in 2015 indicated that the performance of UAE students in these subjects was below international standards (The UAE Ministry of Education – PISA Report 2018). The UAE ranked 34 out of 70 countries in English reading, and 35 out of 70 countries in science and 37 out of 70 countries in mathematics. The report indicated that females are outperforming males in English, maths and science. Overall, the UAE is performing below the average as compared to the Organisation for Economic Co-

operation and Development (OECD) countries (The UAE Ministry of Education – PISA Report 2018).

These independent findings described above also correlate with the information gathered by the UAE public school inspections team. They concluded that although overall governance in schools has improved since inspections began in 2008-2009, standards in mathematics and science are not at the desired level and are deemed to be only acceptable in about 40 per cent of public schools (The UAE Ministry of Education – PISA Report 2018).

4.1.2 Higher Education

Higher education participation in the UAE has continued to rise from 18% in 2000 to 25% in 2008, as shown in Figure 4.1 (The UAE Education System Report, 2012). However, Figure 4.2 shows that these levels are still lower than North America and Western Europe, which have the highest rates of participation in higher education at 71% (The UAE Education System Report, 2012).

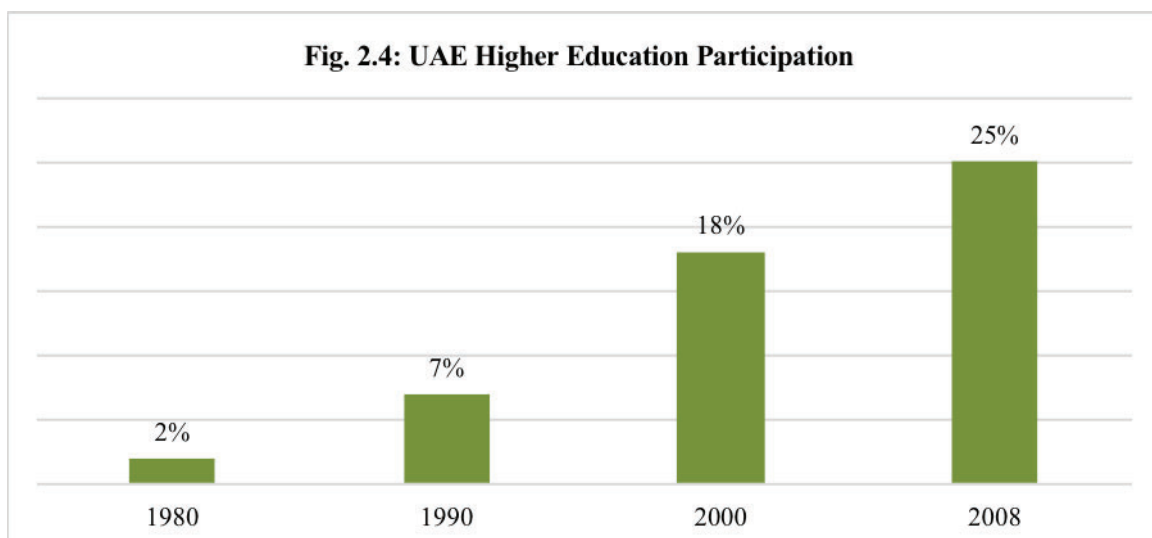


Figure 1.1 UAE Higher Education Participation

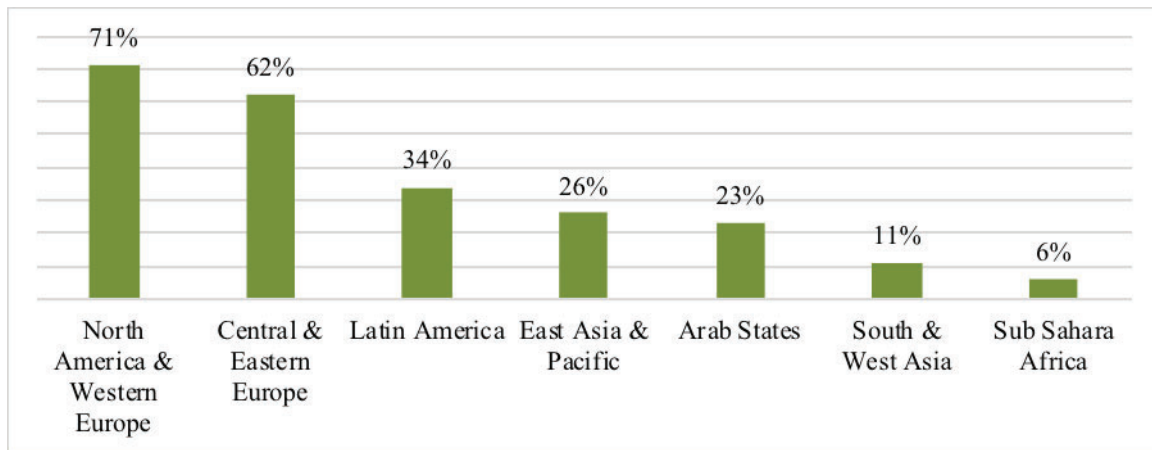


Figure 4.2 Countries Tertiary Level Enrollments 2008-2009

A major focus for the UAE education sector is the link between education and the country's economic development and growth. In particular, they must focus on the most appropriate and cutting edge relevant technologies and innovation that will help to cultivate and encourage skills which are required in the workplace. A report produced by the Organisation for Economic Co-operation and Development (OECD) Skills 2012 stressed the importance of education providers having a greater awareness of employment, and industry trends and skill requirements. This information must then be fed back into the curriculum development process so education providers can develop curricula and suitable programs that meet the requirements of the labour market and society in general (The UAE Education System Report, 2012).

In the UAE, it has been highlighted that there is a gap between what is offered in higher education institutions and the skills that are required in the labour market. This may be partly due to the low number and lack of variety of accredited programs offered in the UAE by accredited bodies (The UAE Education System Report, 2012). The limited offerings are emphasised in the fact that approximately 50% of UAE higher education students are currently studying degrees in business or engineering. Interestingly, the same is true for UAE students traveling abroad for study as 60% of nationals choose to enrol in business administration or in engineering programs (The UAE Education System Report, 2012).

In order to address the gap between the education providers and labour market needs, the National Qualifications Authority (NQA) has issued guidelines to bring about closer collaboration between education providers and industry and business sectors (The UAE Education System Report, 2012).

In Abu Dhabi, the challenge and responsibility of educational reform lies with the Abu Dhabi Education and Knowledge (ADEK). It is evident from their mission and vision statements that quality of education is their highest priority. They aim to be “recognised a world class education system that supports all learners in reaching their full potential to compete in the global market” as well as “*To produce world-class learners who embody a strong sense of culture and heritage and are prepared to meet global challenges*” (ADEK, 2014). Figure 4.3 below which illustrates the ADEC corporate strategy, also clearly highlights the importance of the education system and the continuous improvement of the school system.

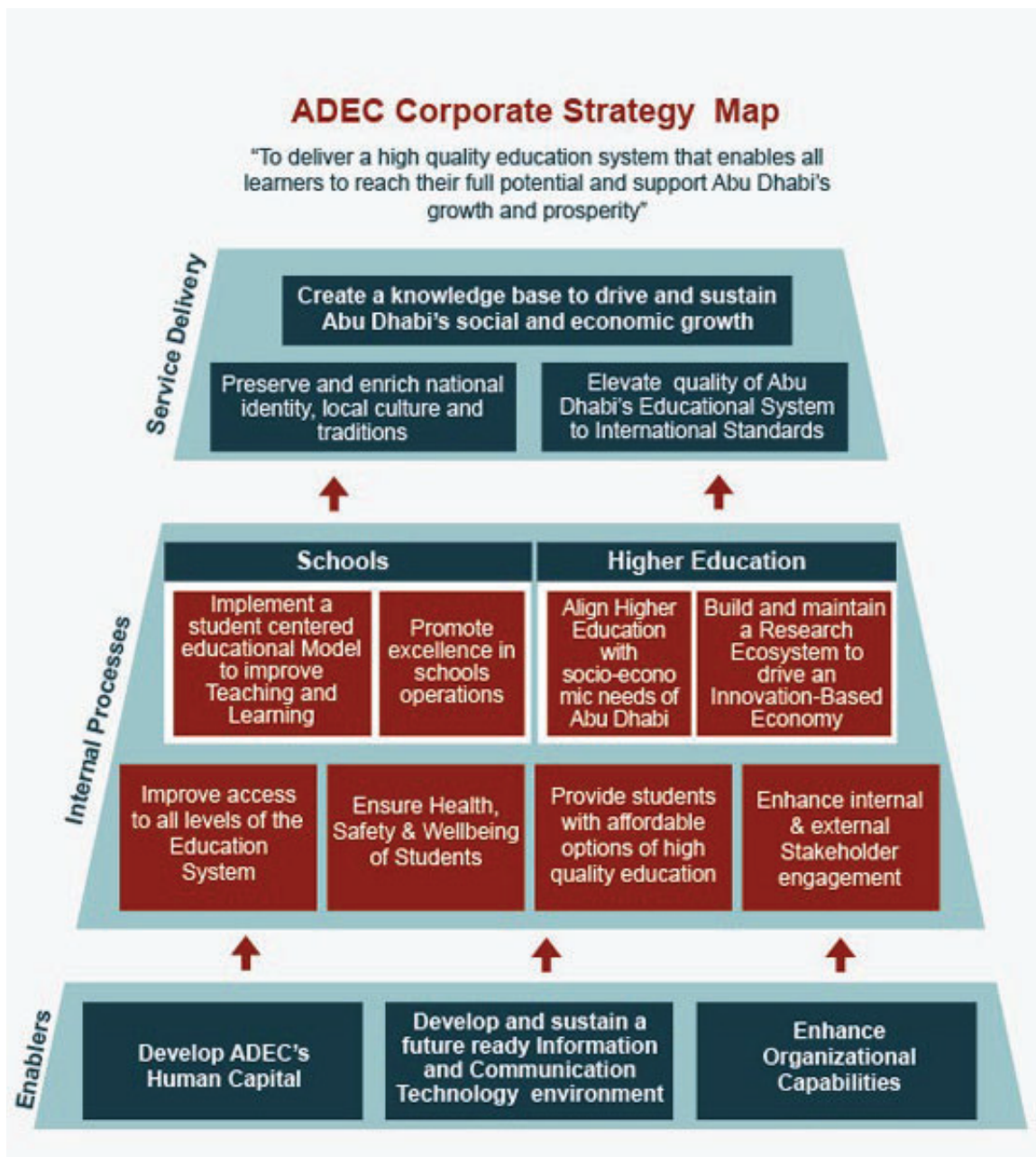


Figure 4.3 ADEK corporate strategy (Taken from ADEK website, 2015)

4.2 Education Sector Challenges

The public education system in the UAE has faced many challenges in recent years which have hindered its development. In 2005, a comprehensive report was generated by the Ministry of Education, which aimed to identify the main problems. This report, which was widely published, highlighted the following problems (adapted from Devitt, 2014).

- Ineffective Teaching standards
- Inappropriate assessment
- Outdated technology
- Unproductive school culture
- Unsustainability of curricula
- Lack of English proficiency
- Consistent use of text book material deemed unsuitable both culturally and linguistically to the cultural sensitivities of Muslim Arab learners.
- Poor teacher training
- Overuse of traditional teaching methods based on a wholly teacher centred pedagogy and mastery through repetition,
- Teaching profession has very low status, is paid poorly and relies on recruitment from other Arab countries and Western countries.
- Lack of interest in teaching as a career among Emiratis and especially male Emiratis

The cumulative effect of all the above failings was demonstrated in a government survey carried out in 2010, which concluded that the public system was continuing to underserve the youth population. This was evident in the fact that 21% of male Emiratis were not completing high school, and 47% were not graduating on time. Coupled with this was the realisation that proficiencies in mathematics and English language were low as compared to international standards.

In order to rectify the situation, the government announced wide ranging plans to improve both the qualifications of teachers and the conditions of its schools. They also announced plans to attract Emiratis into teaching profession and to have all public schools staffed with 90% Emirati teachers by 2020 (Devitt, 2014).

In particular, the Emirate of Abu Dhabi (which will be the focus of this research) is currently in the process of implementing ambitious educational reforms and has made huge investments in

order to bring the best in educational practices from around the world to its citizens. Government educational reforms are being overseen by various bodies such as the Ministry of Education, The Department of Education and Knowledge (ADEK), the Knowledge and Human Development Authority (KHDA), and dedicated educational zones in each Emirate.

The Abu Dhabi governments sustained commitment to education and education reform is evident in the fact that each year the largest percentage of the Federal budget is allocated to the education sector. With education being placed at top of their top agenda, the government, in alliance with the private sector and the corporate world, has pledged an unwavering resolve to transform the region into a knowledge-based society. The ambitious plans are evident in the Abu Dhabi Economic Vision 2030, a visionary document which details the strategies being implemented in order to expand the knowledge economy (ADEC, 2013).

4.3 Education Budget

Two-thirds of Emiratis are under the age of 30 and youth unemployment is considerably higher than the UAE's overall unemployment rate. This demography provides a unique challenge that the government is addressing through Emiratisation policies and investment in education (UAE Yearbook, 2013).

The education sector, which offers Emiratis free education at all levels, has been consistently prioritised in federal budget allocations. It was awarded the largest allocation – at Dh 8.2 billion – in the 2012 budget, with higher education receiving a 28% (Dh 3 billion) boost to fund the further development of national universities and colleges. The federal budget for 2013 allocated education Dh 9.9 billion, with the Ministry of Education receiving a Dh 6 billion allocation to support the implementation of advanced learning methods. The Ministry of Higher Education and Scientific Research received the remaining Dh 3.9 billion to advance higher education in the country, as well as providing overseas scholarships for Emirati students

(UAE Yearbook, 2013).

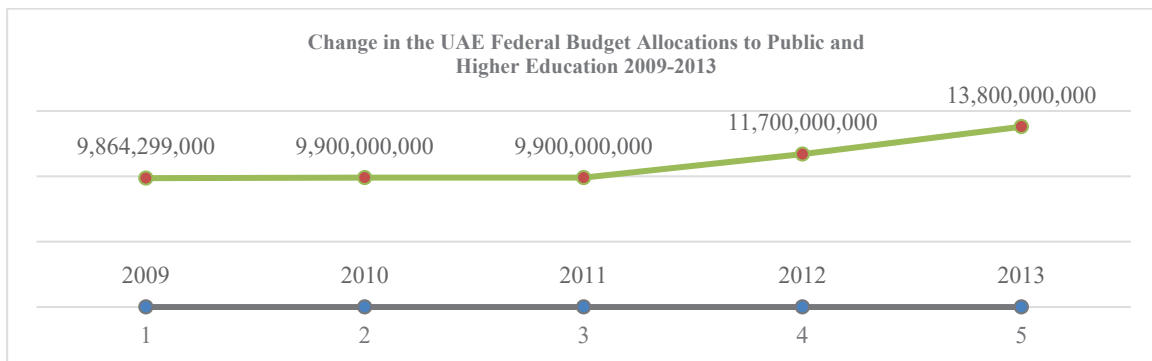


Figure 4.4 shows the change in the UAE Federal Budget Allocations to Public and Higher Education 2009-2013 (AED)

As education spending has increased there has also been an increase in the numbers of schools and also the number of students taking up places in these schools. In the academic year 2013-2014 there were 696,226 students in 1,179 schools. (Ministry of Education; Statistic 2013/2014).

4.4 UAE Knowledge Economy

An important component of the UAE's education strategy is the development of a knowledge economy. The Knowledge economy is related to production and services which are based on knowledge generation, information and high-skilled activities. In order to facilitate the development of a knowledge economy in the UAE, it has been argued that major improvements are required in relation to teaching-learning process. In particular, students will need to develop and improve their higher-order thinking skills including "*creativity, analysis, planning, reordering, problem solving and the development of information into knowledge capital*" (The UAE Education System Report, 2012).

The World Bank Knowledge Economy Index (KEI) is a model which can help countries benchmark themselves against other countries in terms of their ability to operate in a knowledge economy.

This model consists of 4 pillars which focus on many critical components such as “*incentives to encourage individual creativity and knowledge, availability of education opportunities, protection and development of intellectual and knowledge resources, and availability of knowledge facilities and assets available for everyone*” (See Figure 4.5) (The UAE Education System Report, 2012).

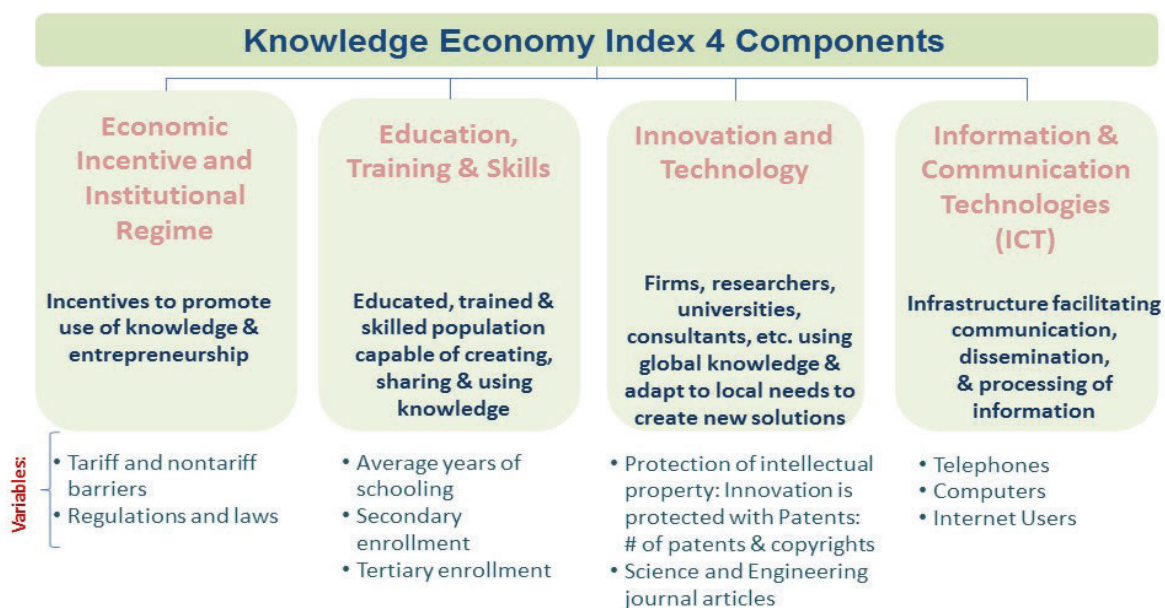


Fig. 4.5: World Bank Knowledge Economy Index (KEI) (Taken from The UAE Education System Report, 2012).

The Global Knowledge Index reports that while the UAE is currently leading the other six GCC countries and is making real progress in developing its knowledge economy, It is currently ranked 25th out of 131 countries. (Mohammad Bin Rashid AL Maktoum Knowledge Foundation & UNDP, 2017) Specific areas of improvement include advancements in terms of innovation and technology published, its high ICT usage (increasing numbers of internet, computer and phone).

A key recommendation given in this report would be for the UAE to increase its cooperation with

one of the top performing countries such as the Nordic and Baltic countries who ranked high in the areas of innovation and knowledge economy development. The key focus should be on the UAE seeing the “*best practices in the areas of academic exchange, professional consultations, education and specialized training programs with special emphasis on Science, Engineering and Technology*” (The UAE Education System Report, 2012).

Figure 4.6: Knowledge Economy Index (KEI) KEI World Bank Ranks 146 countries



Appendix 5 - Culture and Intelligence Theories

5.1 Culture

It is important from the outset to accurately define the term culture and to identify the core competencies related to intercultural understanding. It is evident from the literature that culture is a complex and broad term which relates to a person's individual attitudes, values and beliefs but also covers groups of people in society and influences every aspect of a person's life.

The very earliest definition of culture was developed by Edward Taylor (1871) who in his work entitled 'Primitive Culture' stated that "culture or civilization taken in its broad, ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society". In the years since this first attempt to define the term culture many other scholars have tried to accurately define the term. An attempt by Kroeber & Kluckhohn (1952) to classify all the definitions of culture produced more than 200 different definitions. They were able to organise all the definitions into six categories (1) descriptive; a detailed inventory of the content (2) historical; relating to social heritage and tradition aspects (3) normative; relating to rules and codes of behaviour (4) psychological; mechanisms related to problem solving, promotion of learning, encourages the ability to adapt; is active, not passive (5) structural; levels of organization and (6) genetic; products or artefacts. These categories are still a relevant starting point from which to assess the definitions of culture. One example of this categorisation is a psychological definition by Rubinstein, 2003 "culture forms the mechanism through which people construct and enact meaning". This definition describes the dynamic nature and learning aspect of culture.

A similar exercise carried out by Karrungo (1996) uncovered over 160 definitions relating to culture. Karungo, states that almost all of the definitions of culture encompass aspects of language, customs and values, religion, social policies, structures and institutions.

Hofstede (1992), one of the most prolific theorists in the field of cultural anthropology, defined culture as “the collective programming of the mind which distinguishes the member of one category of people from another.” In this statement, it is evident that culture is considered to be something that is learned. He also details a three-tiered theory for culture based on another of his definitions that “each person’s mental programme is partly unique and partly shared with others, thus distinguishable at three levels, namely the universal, collective and individual levels” The universal level is made up of people’s biological make up and behaviour and is common among most of the world’s population. The collective level is related to language, eating habits, signs of respect etc. that are specific to a particular group of category of people. The individual level refers to the personality and unique traits of individuals.

Culture is also a set of experiences that are common and shared within a group of peoples. The values, attitudes and behaviours that are shared within a particular culture give them a definable identity among the group (Thomas & Inkson, 2003).

Culture can also refer to a set of rules which people abide by in their daily life and that are passed down through generations. These rules are broad and include people’s attitudes, values, communication styles, patterns of thinking and behaviour (Myers, 1996). Earley, Ang & Tan (2003), who are the founders of the cultural intelligence construct defined culture as the “many ways in which individuals think, feel and react to various situations and actions that are gained and shared through the use of symbols and artefacts”.

It is evident in the literature on culture exists as a series of levels and sublevels and that it can be considered in both a broad and narrow sense. Broadly speaking it can refer to 'national culture' and progressively narrows down to individual culture, ethnicity and membership of subgroupings (Moua, 2014). The five basic levels of culture are 'national, *regional, organizational, team, and individual*'.

'National Culture' refers to the "*cultural influences of a nation that result in its national characteristics*" (Moua, 2014). It will include the values held by the majority of the people who live in that nation and will also include values that are developed unconsciously since childhood. While these national values may change slightly over time and from generation to generation they are generally considered to be stable (Moua, 2014). 'Regional Culture' refers to the different values held by different parts of one country or nation. National Cultures always have regional subcultures which have different characteristics such as subtle changes in dialect (Moua, 2014). 'Organizational culture' refers to the culture that is specific to an organization and reflects the beliefs, values, and assumptions of that organization. This culture will be distinctive from competitors and non-competitors in the same field (Moua, 2014). 'Team culture' refers to the values, beliefs, and norms of culture which are present in team environments and which influence the team's operations and outcomes. 'Individual Culture' refers to your individual culture based on who you are and your social upbringing. It will be influenced by your family, peers, education, exposure to media and use of social networks.

While it is important to recognise these different levels of culture it is also important to understand that each of these cultures also contain subcultures or microcultures.

Many theorists also propose that culture is a tiered concept (Black, et al 1999; Schien, 1985; Trompenaars 1994; and Weaver, 1986).

Schein (1985) proposed that culture can be considered on three levels (1) behaviours and artefacts (2) beliefs and values, and (3) underlying assumptions. Similarly, Trompenaars (1994), another notary figure in the field, proposed a multi layered model of culture that is also comprised of three layers. (1) an outer layer (consisting of tangible, observable items), (2) a middle layer (consisting of norms and values) and (3) a core layer (consisting of intangible items or basic assumptions). Black et al, 1999, also takes the idea that culture is not all visible in their tree analogy of culture. This analogy likens culture to a tree whereby the parts of the tree above the ground are the tangible aspects of culture (which corresponds to Schein's behaviours or artefacts) while the parts underground are likened to the supporting roots. The intangible aspects include beliefs, values and underlying assumptions. While they are invisible they are essentially providing life and vitality to the culture.

5.1.1 Approaches to Understanding Culture

The literature on cultural concepts that focuses on functioning and leading effectively in diverse environments are categorised as being aggregate or individual in approach. The majority of research to date on intercultural capability can be categorised as being the aggregate approach as they focus on cultural values and practises (Earley & Peterson, 2004). Notable scholars who have contributed to the aggregate approach include Hall, Hofstede, Hampden-Turner, Trompenaars, and Triandis (Earley & Mosakowski, 2004).

The aggregate approach originated in the 1920's and has its roots in anthropological studies. The main focus of this approach is to identify a set of foundation cultural values that can be attributed to a particular country (Earley & Mosakowski, 2004).

Hofstede developed a cross cultural framework, consisting of five dimensions/cultural values relating to differences between one nation and another. These cultural values reflect national stereotypes of how many people from a respective country function (Livermore, 2010). These five dimensions or cultural values are described as being “points along a continuum which maintain levels of tension with one another” (Livermore, 2010). The idea is that this framework would offer a way to understand the professional and personal interactions that take place in the workplace and to be able to identify when tensions or cultural misunderstanding occur. Hofstede's (1984) culture dimensions are listed below:

1. Time Orientation or Event time vs. Clock time: Event time emphasises the priority and obligation of social relationships e.g. Brazil, India, UAE. Clock time: punctuality and efficiency are most important e.g. Australia, china, US.

2. High Context vs. Low Context: High context cultures are places where people have a significant history and so a great deal of understanding can be assumed. Things operate as if everyone is an insider and knows how to behave. E.g. Latin America, China and UAE. Low Context: A low context culture is anywhere that little is left to the assumption so things are spelled out explicitly e.g. US, Australia.

3. Individualism vs Collectivism: Individualist cultures: the emphasis is on “I “and individual identity, individual decisions and working alone e.g. US, UK. Collectivist cultures: Emphasises “we” and group identity (e.g. family, work, group, organization, tribe). Prefers group decisions and working with others e.g. China, UAE.

4. Low vs. High Power Distance: Low power distance: Expects that all should have equal rights; Is willing to challenge the views of superior's e.g. UK. High Power distance: Expects power holders to be entitled to privileges. Is willing to support and accept the views of superiors e.g. China, UAE, France.

5. Low vs. High Uncertainty avoidance: Low uncertainty avoidance: prefers few rules, little structure and few guidelines. Tolerates unstructured and unpredictable situations e.g. Sweden, Malaysia. High Uncertainty avoidance: Prefers written rules, structure and guidelines. Is uncomfortable with unstructured or unpredictable situations e.g. Greece, UAE, Japan.

Hofstede's model, while being ground-breaking and comprehensive in terms of adding to cross cultural studies has also been widely criticised. The main criticism being that his study is based on the assumption that national territory corresponds to the limits of culture and that there is homogeneity within a national culture without considering that there may be other cultures within a national culture (Mead, 2005). His initial study was also carried out in one international company only (IBM) and so it must be questioned if each IBM unit in each country questioned is representative of the culture within that country as a whole. Surely employees of a certain country only represent a segment of the entire nation. Problems relating to the completion of the questionnaires was also reported, as respondents worried about the level of confidentiality of their responses often gave answers that would please superiors. It is also argued that there is a certain amount of overlap among the actual cultural dimensions themselves as it was found that Power Distance and Masculinity have many similar connotations which could lead to confusion in its interpretation.

Finally, his oversimplification of what are complex structures is also a common criticism which could lead to stereotyping (Kirkman, et al., 2006).

However, it is important to point out that his value dimensions still have relevance in today's cross cultural interactions as it is a starting point for examining the different perspectives and patterns evident in diverse populations.

Fons Trompenaars and Charles Hamden Turner (1997) developed and expanded on Hofstede's work through the development of their Seven Value dimensions of culture theory (1997). This theory is similar to Hofstede's in that it also recognises that foreign cultures are not just randomly different from each other, but that they can be considered as being mirror images of each other along one side of a value dimension. When an individual is faced with a new cultural situation, there are a number of issues that need to be resolved in order to adjust successfully to a new culture. Trompenaars's (1997) studies suggested that the seven dimensions of culture listed below form the basis for resolving problems in intercultural interactions.

The 7 dimensions of culture as described by Fons Trompenaars and Charles Hamden (1997) (adapted from mindtools.com, 2015) are:

1. **Universalism versus particularism:** Universalism refers to people who place a high importance on laws, rules, values, and obligations in all their relationships. Particularism refers to people who believe that each circumstance and relationship dictates the rules.
2. **Individualism versus communitarianism:** Individualism refers to people who believe in personal freedom and achievement, in making your own decisions and looking after yourself. Communitarianism refers to people who believe place more emphasis on groups and teams as opposed to the individual.

3. **Specific versus diffuse:** Specific refers to people who keep their work life and personal life separate and while they value relationships they don't feel that good working relationships impact job outcomes. Diffuse refers to people with significant overlap in their personal and work life who believe good working relationships are important for job outcomes.
4. **Neutral versus emotional:** Neutral refers to people who consciously control their emotions preferring to rely on reason rather than feelings. Emotional individuals prefer to express their emotions.
5. **Achievement versus ascription:** Achievement refers to people who value other people's worth based on their achievements and not on who they are. Ascription refers to people who value the worth of others based on who they are e.g. job title, position of power etc.
6. **Sequential time versus synchronous time:** Sequential time refers to people who place great emphasis on punctuality and planning. Their motto is 'time is money'. Synchronous time refers to people who work on a more flexible time plan.
7. **Internal direction versus outer direction:** Internal direction refers to people who believe that they can control nature or their environment in order to achieve goals. Outer direction refers to people who believe that nature or their work environment controls them.

The aggregate approach to culture, such as Hofstede's and Trompenaars & Hampden Turner's culture dimensions, enables for functioning in a diverse setting due to the common core cultural values that may be encountered in the workplace based on nationalities of workforce.

The aggregate approach to culture has been widely criticised in the literature due to its simplistic nature and also because it takes cultural values or dimensions that have been identified as being from a particular country and assuming that those characteristics can be

generalised to each individual from that given country or culture (Earley & Mosakowski, 2004). The aggregate approach fails to take into consideration that two individuals from the same country can have very different cultural values (Bhawuk, Landis, & Munusamy, 2009). There are also some questions regarding the actual link between cultural values and actual individual action. The argument being that even if a person has a set of cultural values, he may not act in that particular way as denounced by the aggregate theory (Triandis, 1972). For example, a person may be from a culture that values event time orientation yet that person expects clock time orientation. The onset of globalisation has also weakened the effect of the aggregate approach to culture particularly in an organisational setting. While it may be effective when dealing with just one culture, most organisations will have many different nationalities working in diverse teams and so it is unrealistic to expect people to become knowledgeable in the cultural behaviours and practises of each respective culture (Earley & Peterson, 2004).

The development of the individual approach to intercultural effectiveness has gone some way to addressing the shortcomings of the aggregate approach. The individual approach to culture focuses on the characteristics and manifestation of culture at an individual level (Earley, 2006). It is similar to the aggregate approach in that it still takes into account cultural values but differs in the fact that it takes into consideration that each individual will have different beliefs and cognitive processes which will affect how they regard the world around them (Earley & Mosakowski, 2004). So while it is useful to know whether a person is from an event or clock orientated culture, it is much more useful to know if they as individuals are either event or clock orientated.

The concept under investigation in this research, cultural intelligence, also considered to be an individual approach to culture as it focuses on the individual's ability to interact in new and diverse cultural settings (Earley & Ang, 2003, Ang et al., 2006; Templer et al., 2006; Thomas & Inkson, 2003). This individual approach is appropriate to investigate school leaders as it takes the focus away from cultural values and towards a framework that addresses individual differences and capabilities in a cultural setting. CQ also related to capabilities and it can be argued that a capabilities based model will allow for training to strengthen specific areas (Earley & Ang, 2003).

5.1.2 Cultural Conditioning

In order to fully appreciate the effect that culture impacts people's behaviour it is important to explore how culture conditions people's actions. As explained previously, it is a person's core beliefs, values and attitudes that influence their view of others and the environment around them. Cross cultural problems do not occur among individuals who have a familiarity with each other's cultural nuances (Lewis, 2000). It is widely accepted that culture has a significant effect on human behaviour. The concept of cultural conditioning explains how culture is formed in the individual. Hofstede (1981) through his stabilisation of cultural patterns model explains how the origins of a culture is developed through the interaction and reinforcement of four key processes: (1) Outside influences: forces of nature and forces of man including factors such as conquest, trade and scientific discovery, (2) Origins of Culture: the influence of geography, history, economy, demographics, genetics/hygiene, technological and urbanization factors. The origins of culture pave the way for the development of (3) Societal norms – which are the value systems that are shared by the majority. These factors combine to form the (4) Consequences of the culture - which relate to the structure and functioning of institutions, family patterns, education systems, political systems, and social stratification. Throughout the

development process of a culture these four factors are always evolving. The majority of the behaviours that children and adults learn are through the process of conditioning (Grusec & Hastings, 2007).

Bowen (2007), describes the process of cultural conditioning, a process which consists of five steps:

- (1) Observation/instruction: the process of beginning to become aware of a particular behaviour.
- (2) Imitation: the individual is making a conscious effort to carry out the observed behaviours.
- (3) Reinforcement: encouragement is given when the behaviour is right and corrected when the observed behaviour is wrong.
- (4) Internalisation: The individual now requires less encouragement and reinforcement to carry out the particular behaviour or action.
- (5) Spontaneous manifestation: the individual is able to produce the appropriate behaviour without conscious effort.

Lewis (2008) in his values and core beliefs model states that when individuals are faced with their same culture, they repeat and improve their cultural displays based on their own core beliefs. When faced with a culture that is similar to their own culture but different in some ways a process of semi acceptance takes place whereby both cultures must adapt to each other's cultures in a process of mutual synergy. When an individual is faced with an "alien culture" i.e. a culture that is completely different from their core beliefs and values, a resistance develops which can often lead to a withdrawal from the situation with or without the intention of repeating.

5.1.3 Cross Cultural Interaction

Due to the impact of globalisation, cross cultural interactions are now common place in today's society. Leaders and workers are experiencing it in the workplace, tourists are experiencing it as they visit other countries, children and teachers are experiencing it in schools.

The Ethnocentric approach to culture is no longer accepted as being an appropriate way to deal with cross cultural interaction, defined as “judging another culture solely by the values and standards of one's own culture”. Omohundro (2008), individuals who are displaying ethnocentricity will judge other groups in relation to their own ethnic and cultural experiences particularly in regards to “language, behaviour, customs, and religion” (Andersen, 2006.) While ethnocentrism is considered to be a natural human response to diversity, and while it may be only be subtle, it is generally considered to be a negative approach to managing cross cultural interactions (Shimp & Sharma, 1987).

Ethnocentric approaches to management in the work place are no longer the only approach available to managers and leaders. The increasing globalisation of business combined with the need to stay competitive in the workplace means that attitudes toward cross cultural management have had to change. Much of the failure associated with multicultural teams is due to the fact that people have their own stereotypes of others and then use these stereotypes to form opinion of others. Combined with this is the fact that each person who enters the workplace has his or her own “cultural baggage”, that is, their own fixed ideas and perspectives that are difficult to change. Individuals often feel threatened or uncomfortable when they have to deal with individuals from other cultures. Factors such as language barriers, accents and dialects, nonverbal cues, also contribute to any confusion that may occur (Myers, 1996;

Thomas & Inkson, 2003). Often the end result of such interaction is failure and ultimately they create barriers which prevent the organisation from progressing or achieving a competitive advantage.

5.1.4 Overcoming Cultural Differences

Thomas and Inkson (2003) identify three strategies which may help leaders and managers overcome cultural differences.

(1) Convergence theory or expecting others to adapt; whereby all cultures converge towards one dominant culture due to the existence of a set of universal norms. While there is evidence to suggest that this theory is useful in the workplace, it is argued that if it is used excessively there is a danger of cultural differences being ignored or not respected.

(2) Understanding cultural differences; this strategy proposes to give managers with all the information that they need to know about a particular country which should then lead him to be able to interact positively with the particular culture in question. The problem with this approach is that it would be extremely tedious and time consuming and it would be impossible to produce an exhaustive list of all the elements of a particular culture. Also, knowledge alone of these factors would not guarantee success.

(3) Cross-Cultural Competency; The cross cultural competency approach suggests a more holistic, flexible and skilful way to understand a culture. By interacting on a more continuous basis with a culture, ones thinking is gradually altered and tuned to be more sympathetic to culture when interacting with culturally different others. Cultural Intelligence is one example of such as cross cultural competence.

Developing intercultural sensitivity is also key to managing successful cross cultural situations and is described in the literature as being an on-going process (Gardenswartz et al., 2003). Bhawuk and Brislin (2000) define intercultural sensitivity as the “ability to discriminate and experience relevant cultural differences”. Bennet (1986) developed a model entitled The Developmental Model of Intercultural Sensitivity (DMIS), which details the six stages of development relating to intercultural sensitivity (Gardenswartz et al., 2003) ranging from ethnocentric stage, whereby the individuals own culture is at the centre of their reality all the way towards the ethnorelative stage whereby two cultures are successfully blended.

5.1.5 Intercultural Competency

A review of the literature reveals that there are many similar terms and phrases that are used interchangeably with intercultural competency. These include the terms ‘*cross-cultural adaptation, cross cultural competence, intercultural sensitivity, multicultural competence, transcultural competence, global competence, cross-cultural effectiveness, international competence, global literacy, global citizenship, cultural competence, and cross-cultural adjustment*’ (Derdorff, 2004). The preferred and most appropriate term according to Kim & Reuben (1992) is intercultural competency as it is “*not bounded by any specific cultural attributes*”.

Graf (2004) describes how intercultural competences include all the necessary characteristics that an individual must possess which help facilitate effective intercultural interactions. They describe these characteristics as being “*knowledge, skills and abilities which can be developed through learning, training and cultural interaction*”.

An important distinction of Intercultural competence is that it goes beyond just having knowledge about other culture. At its core is the development of an individual's skills and attitudes towards interacting with culturally diverse others. In their definition of intercultural competence, Chen and Starosta (1996), state that interculturally competent persons are able to interact "effectively and appropriately" in situations of diversity or with diverse individuals. They also propose that intercultural competences consist of three perspectives; the affective perspective (which relates to attitudes), the cognitive perspective (which relates to knowledge) and the behavioural perspective (which relates to skills). Fantini (2000) is in agreement with the above characteristics but with one addition, awareness. Pusch (1994) stated that intercultural competence should not only focus on the person but also on the dynamics of the system. She goes on to report that in order to be interculturally competent, one must display the following important skills; 'mindfulness, cognitive flexibility, tolerance for ambiguity, behavioural flexibility, and cross-cultural empathy' (Pusch, 2004). Lustig, and Koester (2003) emphasise that the key facets of intercultural competence are the 'interpersonal and situational context, the degree of appropriateness and effectiveness of the interaction, and sufficient knowledge, motivations, and actions'.

The intercultural competencies listed above are not inherently present in any individual; they must be learned and developed over time. Kayes et al, 2005, state that in order for a person to develop their intercultural competency and promote learning in intercultural situations they must be able to value cultural differences, build relationships with the host culture, listen and observe, cope with ambiguity, translate complex ideas, take action and manage others.

It is evident that intercultural competence is similar to the construct of cultural intelligence, which is the subject of this dissertation. The main similarity is that both constructs mention that competencies must exist at the cognitive, emotional and behavioural levels.

While there is some level of overlap, it cannot be argued that cultural intelligence is just a new name for an old concept. While intercultural competencies has a stronger focus on the type of specific skills and competencies needed to, it has been suggested in the literature that this is just like a “laundry list” approach while the construct of cultural intelligence is a more focused construct which is built on firm theoretical foundations. (Van dyne, et al, 2004),

The next sections will address the theoretical foundation of Cultural Intelligence to include an analysis of where it fits in terms of other intelligence concepts.

5.2 Intelligence Theory

The construct of cultural intelligence was developed within a framework of other intelligences, namely social intelligence, and emotional intelligence. In order to fully understand the significance and application of this relatively new concept it is important to establish how it came into existence and the influences it took from the fields of cognitive psychology, intelligence testing, and cultural anthropology.

5.2.1 History of Intelligence

For nearly 100 years, the field of cognitive psychology have been trying to define and quantify the concept of Intelligence. Through this time, there have been two general schools of thought among psychologists: one related to how knowledge is acquired (intelligence theory) and one relating to how people think (cognitive theory). Running parallel to these schools of thought have been the field of intelligence theory testing in which has witnessed a progressive development of techniques. Similarly, the field of cultural anthropology have also been working towards defining and quantifying the concept of culture.

These three areas of focus—intelligence theory, understanding the concept of culture, and intelligence testing relate directly to the understanding and development of cultural intelligence theory and pave the way for understanding cultural intelligence as a unique unified construct.

A common school of thought among researchers is that intelligence is a combination of both structural and functional components. Structural related to the ability to grasp abstractions, and function is related to the ability to solve problems (Becker, 2003). Thus, intelligence has been defined as an “individual’s overall level of intellectual attainment and ability” (Mayer & Geher,

1996) which involves a “hierarchy of mental, and specific intelligences” (Mayer & Cobb, 2000).

Another definition which was generated by many notable scholars in the field is:

“Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience.” (Gottfredson, 1997 Common statement with 52 expert signatories).

A widely accepted definition of intelligence which is also one of the most cited (Salaovy & Mayer, 1989) is Wechsler’s definition that “*intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment*”. They argue that this statement encompasses everything that researchers in the field believe intelligence to be (Salovey & Mayer, 1990).

The first theorist to contribute to the field of cognitive psychology was Edward Thorndike in the early 1920’s. It was during this era that the ground work for what would become social intelligence was made. Thorndike categorised intelligence into three components relating to the ‘ability to understand and manage ideas (abstract intelligence), concrete objects (mechanical intelligence), and people (social intelligence). He defined social intelligence as “*the ability to understand and manage men and women, boys and girls..... to act wisely in human relations,*” (Sternberg, 2010) Moss and Hunt (1927) also defined social intelligence as the “*ability to get along with others*” and Vernon (1933), defined it as “*the ability to get along with people in general, social technique or ease in society, knowledge of social matters, susceptibility to stimuli from other members of a group, as well as insight into the temporary*

moods or underlying personality traits of strangers" Despite attempts to create measures for social intelligence it dropped off the radar for some time, with Wechsler (1939, 1958) dismissing social intelligence as being nothing more than "*just general intelligence applied to social situations*". It wasn't until Howard Gardner and his theory of multiple intelligences that social intelligence re-emerged. Modern day definitions of social intelligence include that it is an "aggregated measure of self and social awareness, evolved social beliefs and attitudes, and a capacity and appetite to manage complex social change" (Social intelligence lab, 2012).

Another early contributor to the field of cognitive psychology was Charles Spearman (1904) who described general intelligence or the "g" factor. He used factor analysis to examine a number of mental aptitude tests, and he witnessed that individuals who perform well on one cognitive test tend to also perform well on other tests and vice versa for bad performances. He therefore concluded that intelligence was a 'general cognitive ability that could be measured and expressed numerically'. Indeed this conceptual idea formed the basis for the subsequent measurement of the intelligence quotient (IQ) developed by Stern (1914). In more recent times, there have been positive correlations between IQ and self-esteem, psychological adjustment and negative correlations with trait anxiety (Mehrabian, 2000). It has been argued that IQ as a measure only explains variance due to personality factors and traits and that having a high IQ does not necessary lead to a more successful life (Goleman, 1997). This prompted the investigation of other forms of intelligences which would be more linked to positive life outcomes (Goleman, 1997).

Thurstone (1938) offered a different theory of intelligence from Spearman. He disagreed with the view that intelligence as a single, general ability. His theory postulated that there were seven "primary mental abilities" that constituted Intelligence, namely "verbal comprehension,

reasoning, perceptual speed, numerical ability, word fluency, associative memory and spatial visualisation”. This theory relates directly to Gardner’s multiple intelligences, and generates the argument that cultural intelligence is a separate intelligence worthy of study. Thurstone also developed the criteria for measurement in the social sciences: items could be located on a continuum or scale and the locations of these items on the scale should be invariant across different populations (Anderson, 1999).

Howard Gardner (1983) is one of the most prolific theorists in the field of cognitive psychology. His theory of Multiple Intelligences saw intelligence theory move away from the belief that intelligence was something we are born with, something that can be measured numerically and a capacity that is difficult to change. Gardner shifted the focus away from test scores as he believed that numerical expressions of human intelligence do not fully capture the full range of human ability. He was of the opinion that intelligent behaviour does not arise from a single unitary quality of the mind, as the “g” based theories proposed; rather, different kinds of intelligences are generated from specific pools of mental energy. Instead he proposed that there are eight distinct forms of intelligence that can more accurately depict people’ skills as well as abilities. The multiple theory of intelligence included ‘visual-spatial intelligence, verbal-linguistic intelligence, bodily-kinaesthetic intelligence, logical-mathematical intelligence, interpersonal intelligence, musical intelligence, intra personal intelligence and naturalistic intelligence’. Gardner’s theories add to the understanding of both intellectual development and the importance the effects of culture have on the development of intelligence. He states “*There exists at least some intelligences, that are relatively independent of one another, and that they can be fashioned and combined in a multiplicity of adaptive ways by individuals and cultures seems to be increasingly difficult to deny*” (Gardner, 1983).

Gardner was forthright when he discussed his research aims and interests in the field. Firstly, he wanted to expand the field of cognitive and developmental psychology in terms of biological and evolutionary roots, and toward cultural variations in cognitive competencies. Secondly, he aimed to examine multiple intelligence theory from an educational perspective.

“In my view it should be possible to identify an individual’s intellectual profile, at an early age, and draw on this knowledge to enhance that person’s opportunities” (Gardner, 1983).

Thirdly, he spoke of his desire and hope that this research interests would inspire anthropologists who were interested in an educational perspective, to develop a model of how intellectual competencies may be fostered in various cultural settings. This clearly, stating the need for further development of the link between culture and intelligence and thereby supporting the need for the development of a cultural intelligence concept.

Gardner’s multiple theory of intelligence has been widely critiqued in the world of psychology and education, where the theory had widespread application. It has been argued that as a definition of intelligence it is too broad and that the eight different intelligences are more like tales, personality traits and abilities. It is also widely accepted that there is a lack of supporting empirical research for this theory (Waterhouse, 2006). Despite the criticism, this theory of multiple intelligences has been popular among educators who have incorporated his intelligences into their teaching philosophy.

Robert Sternberg is one of the most prominent figures in the field of modern day human intelligence research and is renowned for his understanding of intelligence. He is a leading authority on the development of cognitive psychology and has written many handbooks and

papers specifically related to intelligence. His definition of human intelligence conveys his belief that intelligence is related to how a person handles environmental changes throughout their lifetime:

“a mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one’s life” (Sternberg, 1985), which is relating to how well an individual deals with environmental changes at various stages of their life.

Sternberg’s main stance is that focusing on *“specific types of measurable mental abilities is too narrow”* as it only captures the people who are *“book smart”*. He argues that there are many people, he included, who score badly on intelligence tests but may be creative or be *“street smart”* and so are equally as able to use their ability to shape their environment (Sternberg, 2003).

In his ground breaking triarchic theory of intelligence, he was one of the first psychologists of his time to turn his back to the psychometric approach to intelligence and take a more cognitive approach.

The triarchic theory of intelligence is composed of three subtheories:

- (i) The componential subtheory, which is also known as analytical intelligence, details the nature of the mental processes and mechanisms that underlie intelligent behaviour. These are further divided into metacognitive, performance, or knowledge acquisition components (Sternberg, 1986),
- (ii) The experiential subtheory, which is also known as creative intelligence, details how intelligent behaviours can be explained through the use of previous experience in

helping to mobilise cognitive mechanisms in order to meet the demands of new or familiar tasks/situations.

- (iii) The contextual subtheory, which is also known as practical intelligence, relates intelligence to the outside world and specifies that intelligent behaviour can be explained in the way individuals adapt to the sociocultural environment around them and how they use mechanisms to achieve a better fit with the environment (Sternberg, 1986).

Sternberg states that the concept of intelligence, requires the interaction of each of these three subtheories but he also advises that the componential subtheory is the most developed aspect of the theory and is in fact based upon his earlier componential theory of intelligence (Sternberg, 1977). In his research, he also highlights the importance of the metacognitive or mental processes that control the “strategies and tactics” which are used in intelligent behaviour.

Sternberg further developed his ideas in relation to core mental processes and came up with the following steps: These are (1) recognizing the existence of a problem, (2) defining the nature of the problem, (3) constructing a strategy to solve the problem, (4) mentally representing information about the problem, (5) allocating mental resources to solve the problem (6) monitoring one’s solution to the problem and (7) evaluating one’s solution to the problem.

The clarification of these mental processes form the basis for the concept of cultural intelligence and are further developed in the cultural intelligence model (Thomas et al, 2008)

Sternberg's theories were one of the first set of theories in the field of cognitive psychology to formally address the role and importance of culture in relation to intelligence and his work with Detterman is the foundation for the cultural intelligence model.

“People in different cultures may develop somewhat different intellectual abilities depending on the kind of intellectual competencies that are valued by their particular culture” (Cienciolo & Sternberg, 2004,).

In 1986, a symposium took place which brought together 20 of the world's leading authorities on contemporary intelligence. It was here that Sternberg and Detterman gathered all the views that were held by the attendees and formulated a broad conceptual framework of intelligence which moved away from the traditional focus on linguistic, logical-mathematical, and spatial intelligence. This framework proposes four complimentary ways of conceptualising intelligence, at the individual level, using different loci. This framework became known as Sternberg and Detterman, Multiple loci of intelligence theory and is significant because it identifies multiple forms and loci of intelligence within individuals (Phillips, 2010). It is comprised of the following components:

- (a) Metacognitive intelligence: which is knowledge and control of cognition (the processes individuals use to acquire and understand knowledge);
- (b) Cognitive intelligence: which is individual knowledge and knowledge structures;
- (c) Motivational intelligence: which is an acknowledgement that most cognition is motivated and so it focuses on a person's capability to channel energy toward acquiring knowledge as a locus of intelligence; and

(d) Behavioural intelligence: which focuses on individual capabilities at the action level (Phillips, 2010).

Sternberg and Detterman reasoned that intelligence is an ‘intra-individual attribute’ which operates within a specific context or environment which is different than one’s own culture (Phillips, 2010). Some theorists took this idea of an individual focus further and actually conceptualised that intelligence is a function of the contextual environment of the individual and that intelligence does not actually reside within the individuals but that it is a function of the individual’s culture and society.

At the conclusion of this important symposium, Sternberg and Detterman (1986) summarized that despite the many new ideas put forward there were in reality six main aspects of intelligence that all the experts could agree on and that this should form the basis of future intelligence work (Phillips 2010).

1. In terms of biological processes, in order for a person to be considered intelligent they must have control over and be able to regulate their sensory organs to include their levels of perception, sensation and attention.
2. At the mental level, intelligence is related to high level cognitive function to include, abstract reasoning, problem solving and decision making.
3. Intelligence must encompass metacognitive and executive processes. The individual must “know how to know”.
4. For an individual to be classed as intelligent they must have a certain amount of crystallised, formal, learned declarative and experimental knowledge, all within a particular context.

5. Intelligence should be defined in terms of verbal or non-verbal behaviour.
6. Behaviour is culturally bound and is an attribute of the person operating with in a particular environment.

Early and Ang, the developers of the Cultural Intelligence concept model therefore, built their model around Sternberg and Detterman's work. Similarly, they proposed a theoretical model with Metacognitive, Cognitive, Motivational and Behavioural capabilities.

A few more notable theorists in the field of cognitive intelligence include Stephen Ceci, who developed the concept of Bio Ecological Theory of Intelligence. In this theory he argued that that IQ levels are dependent on context and he was critical of the fact that the traditional concepts of intelligence ignored the role that society played in moulding intelligence (Ceci, 2008). He also excluded the ideas of a single capability of general intelligence preferring to view intelligence as the outcome of many cognitive potentials, biological in nature which facilitate critical thinking and knowledge acquisition. He also supports that intelligence is related to the contextual environment and that it required motivation to grow. These are key ideas which have also been incorporated into part of the cultural intelligence model (Cianciolo and Sternberg, 2004).

Jerome Bruner, also followed in the footsteps of Sternberg's ideas linking intelligence and culture. In his work, he was against the historic separation of anthropology and psychology and was dedicated towards incorporating the two disciplines in his work. Bruner is of the opinion that the aim of cognitive psychology is to discover and describe formally the meaning behind all interactions of human beings and the world and also that the quest to understand the meaning within culture are the real causes of human action (Bruner et al. 1996).

Michael Cole, a cognitive psychologist who specialises in understanding how people think, has written extensively about how the culture of a person can affect the way he or she thinks. He strengthens the link between cognitive psychology and culture through his work in determining if learning and thinking abilities are different across various cultures (Cole et al, 1971).

5.2.2 Links with Practical Intelligence, Social Intelligence and Emotional Intelligence

Experts in intelligence theory have identified many positive correlations related to an individual's Intelligence Quotient (IQ) such as levels of self-esteem and psychological wellbeing (Mehrabian, 2000). However, researchers in the field have recognised that having a high IQ does not automatically mean that a person will have a successful life (Goleman, 1997). Similarly, having a high IQ did not account for other variances other than personality factors and traits (Mehrabian, 2000). In order to better predict better life outcomes, researchers began to look for other forms of intelligence, as Gardner was of the view that having multiple intelligences was the key to having better outcomes in life (Goleman, 1997).

5.2.2.1 Practical Intelligence

Practical intelligence, defined as the ability of an individual to find the best fit between themselves and their environment was introduced as a concept by Sternberg and colleagues in the mid- to late- 1980s (Sternberg, 1988; Wagner & Sternberg, 1985). The various definitions that have subsequently been produced on the concept have generally included a reference to the ability of an individual to deal with everyday life's problems and situations (Bowman, Markham, & Roberts, 2001). In layman's terms, the concept can be more readily understood as "intuition" or "common sense". It can also be thought of in terms of being "street smart", which contrasts with the traditional analytic or academic "book smart" view of intelligence.

The theories of Social and Emotional Intelligence are perhaps two of the most prevailing intelligence theories in the field and are linked to cultural intelligence.

Social Intelligence Theory

The theory of social intelligence is an old yet prevailing theory in the field of cognitive psychology. First introduced in the 1920's by Thorndike its popularity has peaked and waned over the years but it still remains one of the more contemporary forms of intelligence. It is defined by Thorndike as being “the ability to understand men and women, boys and girls—to act wisely in human relations... the ability to perceive one's own and others' internal states, motives, and behaviours, and to act toward them optimally on the basis of that information” (Salovey & Mayer, 1990). While Thorndike, initially thought of social intelligence as being entirely related to interpersonal skills, many researchers who have added to the development of social intelligence believe that it is a multifaceted concept which is just as important as the cognitive aspect of intelligence (Sternberg & Grigorenko, 2006). This is evident in the wide array of definitions available for the concept.

Marlowe (1986) discussed how social intelligence was related to the ability to understand another individual feelings, thoughts and behaviours along with your own and to take appropriate action. Silvera et al (2001) described social intelligence as being comprised of three components, social information process, social skills and social awareness. Other ideas relating to the scope of social intelligence include, knowing about social rules and social life, being able to decipher non-verbal cues, having the ability to interpret social situations and being flexible when faced with various social situations, and when faced with complex situations having the ability to deal with it in a sensible manner (Fredakova, & Jelenova, 2004). Gardner,

who developed the theory of multiple intelligences, incorporated some aspects of social intelligence into his model through the interpersonal and intrapersonal intelligence factors (Brualdi, 1996; Salovey & Mayer 1990; Wong & Law, 2002). These interpersonal and intrapersonal aspects are also present in the newer, yet related constructs of emotional intelligence and cultural intelligence.

The measurement of individual differences in social intelligence have been developed psychometrically, much like those for IQ, but Thorndike (1920) was of the belief that “convenient tests of social intelligence are hard to devise.... Social intelligence shows itself abundantly in the nursery, on the playground, in barracks and factories and salesroom, but it eludes the formal standardized conditions of the testing laboratory.”

It is evident from the literature that the development of the construct of emotional intelligence is firmly rooted in social intelligence theory (Dulewicz & Higgs, 2000; Salovey & Mayer, 1990; Wong & Law 2002). However, the concept of emotional intelligence was not termed until the 1970's due to the fact that emotions and intelligence had not yet been linked together in research. The introduction of Gardner's multiple intelligence theory coupled with advances in cognitive research, meant that for the first time the link between emotion and cognition was made (Mayer, 2001). However, emotional intelligence as a concept was not widely accepted until Salovey & Mayer (1990) began to publish highly regarded peer reviewed research on the topic (Brackett & Mayer, 2003; Palmer et al., 2003). The book entitled “Emotional intelligence” by Gary Goleman was responsible for popularising the term emotional intelligence and making it a hot topic in both academic and non-academic circles.

Emotional Intelligence Theory

The theoretical background of emotional intelligence is subject to much continuing debate in the field. Many definitions exist and there is considerable debate among scholars as to what skills should be included under the umbrella term of emotional intelligence.

Emotional intelligence is defined by the co-founders (Salovey & Mayer, 1990) as being “a set of skills hypothesised to contribute to the accurate expression of emotions in others and in oneself... the use of feelings to motivate, and achieve in one’s life”. Emotions are defined as being “organised responses, crossing the boundaries of many psychological subsystems including physiological, cognitive, motivational and experiential systems”.

Goleman, who was an influential figure in the development of emotional intelligence theory defines it as “*being able to motivate oneself and persist in the face of frustrations; to control impulse and delay gratification; to regulate one’s moods and keep distress from swamping the ability to think; to empathize and to hope*” (Goleman 1997). He also proposed a set of skills and attributes that encompass emotional intelligence to include character, emotion management, self-control, empathy, self-awareness, good behaviour, persistence, zeal, motivation and social skills.

Goleman is also of the opinion that emotional intelligence is a key factor in being able to restrain emotional impulses, in the smooth handling of relationships and in helping to read one another’s innermost feelings (Goleman, 1997). Goleman also argues that emotional intelligence is essential for a successful life (Mehrabian, 2000) and maintaining positive relationships through its ability to foster emotional empathy and accurate emotional recognition (Goleman, 1997; Schutte et al., 2001).

Emotional Intelligence has also been described as being a set of ‘core skills - knowing yourself, maintaining control, reading others, perceiving accurately, and communication with flexibility and higher order skills - taking responsibility, generating choices, embracing a vision, having courage and demonstrating resolve’ (Kobe et al, 2001). Mayer & Cobb (2000) describe it as containing a hierarchy of skills, which build on each other, similar to those skills found in other definitions of intelligence.

One intriguing aspect of emotional intelligence, according to Goleman (1997) is that it can be learned. This explains why emotional intelligence as a concept caught the attention of business leaders who began to invest in emotional intelligence training and education.

Despite Goleman’s efforts in raising the profile of emotional intelligence, his work has been subject to criticism. Generally, his definition has been criticised for being too broad and for not actually describing anything new (Matthews et al., 2002; Zeidner et al., 2003). Critics have pointed out that his work has taken some of the emphasis away from IQ (Cobb & Mayer, 2000). His focus on motivational aspects rather than focusing on the process of understanding emotions also goes against many of the previous ideas on intelligence whereby motivation was not considered to be important. His use of motivation and optimism as components of emotional intelligence also goes against other researchers in the field who actually claim that motivation and optimism are actually outcomes of emotional intelligence and so cannot be components. His claims that emotional intelligence was responsible for 80% of life’s success were also met with scepticism among critics (Mayer & Cobb, 2000).

Reuven Bar-On (2000) added to the field of emotional intelligence research by defining it as “an array of non-cognitive capabilities, competencies, and skills that influence one’s ability to succeed in coping with environmental demands and pressures” (Matthews et al., 2002). He was of the belief that emotional intelligence was different from general intelligence as it focused on personal, emotional and social competencies as opposed to cognitive dimensions (Kobe et al., 2001).

Mayer and Salovey are some of the main contributors to the academic development of emotional intelligence. Their definition of emotional intelligence is the “ability to monitor one’s own and others feelings and emotions to discriminate among them and to use this information to guide one’s thinking and actions”. They subsequently amended this definition of emotional intelligence as “the ability to perceive and express emotion accurately and adaptively, the ability to understand emotion and emotional knowledge, the ability to use feelings to facilitate thought, and the ability to regulate emotions in oneself and in others” (Salovey & Pizarro, 2003).

Their understanding of the concept was that emotional intelligence would enable a more precise evaluation and manifestation of emotions, effective regulation of emotions and the achievement of goals through the utilisation of feelings in motivation and planning processes (Salovey & Mayer, 1990). They also describe emotional intelligence as recognising emotion, reasoning with emotions and processing emotional information.

Most scholars accept that emotional intelligence is an individual difference which includes skills that can be learned and built up over one’s lifetime (Ashkanasy et al., 2002). It is also widely accepted that the concept of emotional intelligence meets the criteria to be considered

an intelligence which is (1) reflecting behaviour in the real world, (2) being purposive or directed toward goals, and (3) involving either adaptation to the environment or automation of high-level processes (Jordan, 2003). It is therefore, generally considered to be a valid construct which has many important applications in both personal and organisational life. However, there are many critiques of the concept mainly due to the fact that it is felt that its power is overestimated and that as a concept it is over popularised (Mayer, 2001; Mayer & Cobb, 2000).

Emotional Intelligence is considered to be distinct from academic intelligence yet there is a feeling that it has led to a reduction in the importance of IQ mainly due to Goleman's claims of its power (Cobb & Mayer, 2000). Many of the researchers in the field do not agree with Goleman's claims as to the power of emotional intelligence and there is little evidence to back up its proposed effectiveness in predicting life outcomes (Carusot al., 2002).

On the other hand, Becker (2003) who is not a supporter of the construct, argues that emotional intelligence is not a distinct, valid construct, and that it should be considered simply as a subset of standard intelligence. A counter argument to this claim is that individuals can have a high level of emotional intelligence yet a low level of standard intelligence (IQ) and so indicating that both constructs are therefore distinct from one another. Kobe et al (2001) has also demonstrated that emotional intelligence is independent of the abilities commonly associated with IQ. Other evidence, such as the fact that emotional intelligence and general intelligence stimulate activates in different sides of the brain, all point to the fact that emotional intelligence is more than just a subset of general intelligence (Mutso, 2004).

Other criticisms of emotional intelligence include the reported problems associated with measuring emotional intelligence, It has been described in the literature as being an elusive

construct (Becker, 2003) yet many researchers are happy with the high reliabilities and consistency of the Multifactor Emotional Intelligence Scale (MEIS) which measures emotional intelligence (Jordan et al., 2003).

Also, there is the concern that emotional intelligence is very closely related to personality constructs, with some authors even stating that it is indistinguishable from personality (Becker, 2003; Davies et al., 1998).

Overall, from an academic perspective, it is clear that the concept of multiple intelligences is well established in the literature. From a practical perspective, many employers are also looking toward the concepts of emotional intelligence in addition to IQ when it comes to selecting and training employees. When it comes to situations that are characterised by cultural diversity, another form of intelligence, Cultural Intelligence has been posited as one useful tool that will enable individuals to handle culturally diverse situations more effectively.

Appendix 6A: Final Questionnaire

Understanding the relationship between the levels of Cultural Intelligence (CQ) and the ability to adapt leadership style amongst the school leaders in the Emirate of Abu Dhabi.

The results of this survey, which requires approximately 30 minutes to complete, shall be used for the purpose of PhD thesis and related journal articles and/or conference presentations. The survey is fully confidential and only the student and research supervisors will have access to the data. A summary of survey results will be available at Durham University. Data gathered will be stored for five years at the university premises.

All Principals working within the education sector of Abu Dhabi are invited to participate in this study. There are no questions in the survey that require personal identification and therefore no participants shall be identified within the research.

Your participation is fully voluntary and you have the right to withdraw from the study at any time. Should you decide to withdraw from the study, there are no adverse consequences or penalties. In light of the fact that no personal details are gathered from participants, your response to this survey will be taken as implied, informed consent.

If you have any questions related to the survey or research project, please contact me using the following contact: Ali Aldhaheeri (alialdhaheeri@me.com)

Part 1: The 20-item four factor CQS (the CQ Scale)

Please select how accurately each statement describes you.

CQ-Strategy:		Strongly Disagree					Strongly Agree	
MC1	I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.	1	2	3	4	5	6	7
MC2	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.	1	2	3	4	5	6	7
MC3	I am conscious of the cultural knowledge I apply to cross-cultural interactions.	1	2	3	4	5	6	7
MC4	I check the accuracy of my cultural knowledge as I interact with people from different cultures.	1	2	3	4	5	6	7
CQ-Knowledge:		Strongly Disagree					Strongly Agree	
COG1	I know the legal and economic systems of other cultures.	1	2	3	4	5	6	7
COG2	I know the rules (e.g., vocabulary, grammar) of other languages.	1	2	3	4	5	6	7
COG3	I know the cultural values and religious beliefs of other cultures.	1	2	3	4	5	6	7
COG4	I know the marriage systems of other cultures.	1	2	3	4	5	6	7
COG5	I know the arts and crafts of other cultures.	1	2	3	4	5	6	7
COG6	I know the rules for expressing non-verbal behaviors in other cultures.	1	2	3	4	5	6	7
CQ-Motivation:		Strongly Disagree					Strongly Agree	
MOT1	I enjoy interacting with people from different cultures.	1	2	3	4	5	6	7
MOT2	I am confident that I can socialize with locals in a culture that is unfamiliar to me	1	2	3	4	5	6	7
MOT3	I am sure I can deal with the stresses of adjusting to a culture that is new to me.	1	2	3	4	5	6	7
MOT4	I enjoy living in cultures that are unfamiliar to me.	1	2	3	4	5	6	7
MOT5	I am confident that I can get used to the shopping conditions in a different culture	1	2	3	4	5	6	7
CQ-Behavior:		Strongly Disagree					Strongly Agree	
BEH1	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.	1	2	3	4	5	6	7
BEH2	I use pause and silence differently to suit different cross-cultural situations.	1	2	3	4	5	6	7
BEH3	I vary the rate of my speaking when a cross-cultural situation requires it.	1	2	3	4	5	6	7
BEH4	I change my non-verbal behavior when a cross-cultural situation requires it.	1	2	3	4	5	6	7
BEH5	I alter my facial expressions when a cross-cultural interaction requires it.	1	2	3	4	5	6	7

Part 2: MLQ Multifactor Leadership Questionnaire

This section will help you describe your leadership style as you perceive it. Starting with the first question, judge how frequently each statement fits you. If an item is irrelevant, or if you are unsure or do not know the answer, leave it blank. Use the rating scale below:

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

1.	I provide others with assistance in exchange for their efforts	0	1	2	3	4
2.	I re-examine critical assumptions to question whether they are appropriate	0	1	2	3	4
3.	I fail to interfere until problems become serious	0	1	2	3	4
4.	I focus attention on irregularities, mistakes, exceptions, and deviations from standards	0	1	2	3	4
5.	I avoid getting involved when important issues arise	0	1	2	3	4
6.	I talk about my most important values and beliefs	0	1	2	3	4
7.	I am absent when needed	0	1	2	3	4
8.	I seek differing perspectives when solving problems	0	1	2	3	4
9.	I talk optimistically about the future	0	1	2	3	4
10.	I install pride in others for being associated with me	0	1	2	3	4
11.	I discuss in specific terms who is responsible for achieving performance targets	0	1	2	3	4
12.	I wait for things to go wrong before taking action	0	1	2	3	4
13.	I talk enthusiastically about what needs to be accomplished	0	1	2	3	4
14.	I specify the importance of having a strong sense of purpose	0	1	2	3	4
15.	I spend time teaching and coaching	0	1	2	3	4
16.	I make clear what one can expect to receive when performance goals are achieved	0	1	2	3	4
17.	I show that I am a firm believer in "If it isn't broke, don't fix it."	0	1	2	3	4
18.	I go beyond self-interest for the good of the group	0	1	2	3	4
19.	I treat others as individuals rather than just as a member of a group	0	1	2	3	4
20.	I demonstrate that problems must become chronic before I take action	0	1	2	3	4
21.	I act in ways that build others' respect for me	0	1	2	3	4
22.	I concentrate my full attention on dealing with mistakes, complaints, and failures	0	1	2	3	4
23.	I consider the moral and ethical consequences of decisions	0	1	2	3	4
24.	I keep track of all mistakes	0	1	2	3	4
25.	I display a sense of power and confidence	0	1	2	3	4
26.	I articulate a compelling vision of the future	0	1	2	3	4
27.	I direct my attention toward failures to meet standards	0	1	2	3	4
28.	I avoid making decisions	0	1	2	3	4
29.	I consider an individual as having different needs, abilities, and aspirations from others	0	1	2	3	4
30.	I get others to look at problems from many different angles	0	1	2	3	4
31.	I help others to develop their strengths	0	1	2	3	4
32.	I suggest new ways of looking at how to complete assignments	0	1	2	3	4
33.	I delay responding to urgent questions	0	1	2	3	4

34.	I emphasize the importance of having a collective sense of mission	0	1	2	3	4
35.	I express satisfaction when others meet expectations	0	1	2	3	4
36.	I express confidence that goals will be achieved	0	1	2	3	4

Part 3: Leadership style adaptability.

Please select how accurately each statement describes you

CO impact on the ability of school leaders to adapt their leadership style		Strongly Disagree					Strongly Agree	
LA1	I have a high level of tolerance and acceptance toward other cultures	1	2	3	4	5	6	7
LA2	I modify the way I influence people to achieve organizational goals depending on the individual's particular culture	1	2	3	4	5	6	7
LA3	I adapt my approach to planning and scheduling tasks to accommodate the preferences (structured vs. flexible) of a diverse workforce	1	2	3	4	5	6	7
LA4	I change the way I provide feedback depending on the culture of the other person	1	2	3	4	5	6	7
LA5	I alter my leadership style when leading a culturally-diverse workforce to maximize impact	1	2	3	4	5	6	7
LA6	I constantly adapt and adjust my leadership style when dealing with diverse workforce	1	2	3	4	5	6	7
LA7	I adapt my leadership style (Transformational, Transactional; Laissez Faire) based on the culture of the subordinates	1	2	3	4	5	6	7
LA8	I adapt and flex the way I manage external stakeholder relationships to best fit different cultural expectations	1	2	3	4	5	6	7
LA9	I seek culturally different views in solving problems	1	2	3	4	5	6	7
LA10	I am adaptable and am prepared to change plans as circumstances change	1	2	3	4	5	6	7
LA11	I adapt and flex my leadership style based on external influences (i.e. geographic location and regulatory framework)	1	2	3	4	5	6	7
LA12	I amend my leadership style to reach a compromise solution by which all stakeholders maintain self-respect	1	2	3	4	5	6	7
LA13	I recognise the need to continually improve my language capabilities in order to better communicate with culturally diverse/multilingual stakeholders	1	2	3	4	5	6	7

Part 4: Demographics

Demographics												
1	What is your Nationality?		UAE National					Non-UAE National				
	If you're not a UAE National, please indicate your origin:		Arab					North American				
			African					European				
			Asian					Australian / New Zealander				
		Other, please specify										
2	What type of institution are you working for?		Public School					Private School				
3	What is your age?	18-25	26-35	36-45	46-55	56-65	Over 65					
4	What is your gender?		Male					Female				
5	What is the highest level of education you have completed?		High School					College/ Diploma Degree				
			Bachelor's Degree					Master's Degree				
			PhD					Technical / Vocational Training				
			Others, please specify									
6	How many years of Management / leadership Experience do you have?		0-2 years					3-5 years				
			6-10 years					11-20 years				
			Over 20 years									
7	What is your mother tongue?		Arabic					English				
			German					French				
			Spanish					Other, please specify				
8	How many languages apart from your mother tongue do you speak fluently?		0					1				
			2					3				
			4					5				
9	What level of institution are you working for?		Nursery					KGs				
			Primary School					Secondary School				
			High School					KGs to Primary School				
			KGs to Secondary School					KGs to High School				
			Other, please specify									
10	How many nationalities are represented amongst your staff?		Less than 10					11 to 20 Nationalities				
			21 to 30 Nationalities					31 to 40 Nationalities				
			Over 40 Nationalities									
11	How many Countries have you visited?		None					1-3				
			3-5					5-10				
			More than 10									
12	Have you visited other countries? Please tick as many as applicable		For Business					For Tourism				
			For Study					Re-located				
			Other, please specify									
13	Have you worked/lived in other countries?		Yes					No				
			Less than a year					1-3				

	If yes how long did you work / live in other countries?	3-5	5-10
		More than 10	

Thank you for completing this questionnaire. If you would be willing to take part in a 10-minute telephone interview at a convenient time to follow up some of your answers, please tick box.

	Yes, I would be willing to take part in a 10-minute telephone interview.
--	--

Name: _____

School Name: _____

Email: _____

Phone: _____

فهم العلاقة بين مستويات الذكاء الثقافي والقدرة على تكيف أسلوب القيادة في أوساط قادة المدارس في إمارة أبوظبي

ستستخدم نتائج هذا المسح في إعداد أطروحة دكتوراه ومقالات ذات صلة و/أو عروض تقديمية في مؤتمرات، ولا يستغرق إكماله أكثر من نصف ساعة. وهو سرّي للغاية، حيث لا يستطيع الاطلاع على البيانات إلا الطالب والمشرفون على البحث. وسيتوفر موجز عن نتائج البحث في جامعة دورهام، كما سيتم الاحتفاظ بالبيانات لمدة خمس سنوات في مباني الجامعة.

إن جميع المدراء العاملين في قطاع التعليم في أبوظبي مدعوون إلى المشاركة في هذه الدراسة. وليس هناك أسئلة في المسح تتطلب إثبات الشخصية، وبالتالي لن يشير البحث إلى هوية أي من المشاركين.

إن مشاركتكم طوعية تماماً ولديكم الحق في الانسحاب من الدراسة في أي وقت. ولن يترتب على قرار الانسحاب من الدراسة أي عواقب سلبية أو جزاءات. وفي ضوء عدم جمع أي معلومات شخصية من المشاركين، فإن إجاباتكم عن أسئلة المسح تعتبر موافقة ضمنية مستنيرة.

إذا كان لديكم أي سؤال يتعلّق بالمسح أو مشروع البحث، الرجاء الاتصال بي:

علي سعيد الظاهري (alialdhaeri@me.com)

أولاً: القدرة على تكييف أسلوب القيادة

الرجاء اختيار مقدار دقة كل جملة تصفك.

أوافق بشدة							لا أوافق بشدة								
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA1	لدي مستوى عالٍ من التسامح وقبول الثقافات الأخرى
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA2	أعدّل طريقة التأثير على الآخرين لتحقيق الأهداف المؤسسية تبعاً لثقافة الأفراد
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA3	أكيّف أسلوبِي فِي تخطيط المهام وبرمجتها (منظم او مرن) للتوافق مع تفضيلات القوى العاملة المتنوّعة
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA4	أغيّر طريقة تقديم التغذية الراجعة تبعاً لثقافة الشخص الآخر
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA5	أغيّر أسلوبِي القيادي عندما أقود قوى عاملة متنوّعة الثقافات لتعظيم التأثير عليهم
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA6	لدي سلوك متسق في تكييف أسلوبِي القيادي وتعديله عند التعامل مع قوى عاملة متنوّعة
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA7	أكيّف أسلوبِي بناء على ثقافة المرؤوسين
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA8	أكيّف وأعدّل الطريقة التي أدير بها العلاقات مع المتعاملين الخارجيين لتتلاءم على أفضل وجه مع التوقعات الثقافية المختلفة
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA9	أبحث عن وجهات النظر المختلفة ثقافياً عند حل المشاكل
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA10	أنا قابل للتكيّف ومستعدّ لتغيير الخطط بتغيّر الظروف
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA11	أكيف أسلوبِي القيادي وأعدّله بناء على تأثير بيئة المؤسسة مثل الموقع الجغرافي وانظمة العمل
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA12	أعدّل أسلوبِي القيادي للوصول إلى حل وسط يحافظ بموجبه جميع أصحاب العلاقة على احترام الذات
7	6	5	4	3	2	1	7	6	5	4	3	2	1	LA13	أدرك الحاجة إلى تحسين قدراتي اللغوية باستمرار للتواصل بشكل أفضل مع أصحاب العلاقة المتعدّدي اللغات والمتنوّعي الثقافة

ثانياً: مقياس الذكاء الثقافي ذو الأربعة عوامل المكوّنة من 20 بنداً

الرجاء اختيار ما مقدار دقة كل جملة تصفك.

أوافق بشدة							لا أوافق بشدة							الذكاء الثقافي – الاستراتيجية:	
7	6	5	4	3	2	1	7	6	5	4	3	2	1	MC1	أدرك المعرفة الثقافية التي أستخدمها عند التفاعل مع خلفيات ثقافية متباينة.
7	6	5	4	3	2	1	7	6	5	4	3	2	1	MC2	أعدّل معرفتي الثقافية عندما أتفاعل مع أشخاص من ثقافة غير مألوفة لدي.
7	6	5	4	3	2	1	7	6	5	4	3	2	1	MC3	أدرك المعرفة الثقافية التي أطبقها على التفاعلات بين الثقافات
7	6	5	4	3	2	1	7	6	5	4	3	2	1	MC4	أتحقّق من دقة معرفتي الثقافية عندما أتفاعل مع أشخاص من ثقافات مختلفة.
أوافق بشدة							لا أوافق بشدة							الذكاء الثقافي – المعرفة:	
7	6	5	4	3	2	1	7	6	5	4	3	2	1	COG1	أعرف النظم القانونية والاقتصادية للثقافات الأخرى.
7	6	5	4	3	2	1	7	6	5	4	3	2	1	COG2	أعرف أصول (مثل المفردات والنحو) اللغات الأخرى

7	6	5	4	3	2	1	أعرف القيم الثقافية والمعتقدات الدينية للثقافات الأخرى.	COG3
7	6	5	4	3	2	1	أعرف نظم الزواج في الثقافات الأخرى.	COG4
7	6	5	4	3	2	1	أعرف حرف الثقافات الأخرى وفنونها.	COG5
7	6	5	4	3	2	1	أعرف قواعد التعبير عن السلوكيات اللا شفوية في الثقافات الأخرى.	COG6

الذكاء الثقافي – الدافع: لا أوافق بشدة أوافق بشدة

7	6	5	4	3	2	1	أستمتع بالتفاعل مع أشخاص من ثقافات أخرى.	MOT1
7	6	5	4	3	2	1	أنا واثق من أنني أستطيع الاختلاط بالمواطنين في ثقافة غير مألوفة لدي.	MOT2
7	6	5	4	3	2	1	أنا واثق من قدرتي على التعامل مع ضغوط التكيف مع ثقافة جديدة علي.	MOT3
7	6	5	4	3	2	1	أستمتع بالعيش في ثقافات غير مألوفة لدي.	MOT4
7	6	5	4	3	2	1	أنا واثق من أنني أستطيع التعود على شروط التسوق في ثقافة مختلفة.	MOT5

الذكاء الثقافي – السلوك: لا أوافق بشدة أوافق بشدة

7	6	5	4	3	2	1	أغير سلوكي الشفهي (مثل النبرة والنغمة) عندما يتطلب ذلك التفاعل بين الثقافات.	BEH1
7	6	5	4	3	2	1	أستخدم التوقف والصمت بطريقة مختلفة للتلاؤم مع مختلف المواقف بين الثقافية.	BEH2
7	6	5	4	3	2	1	أبدل سرعة كلامي عندما يتطلب ذلك موقف يجمع بين ثقافات مختلفة.	BEH3
7	6	5	4	3	2	1	أغير سلوكي اللا شفهي عندما يقتضي ذلك موقف يجمع بين ثقافات مختلفة.	BEH4
7	6	5	4	3	2	1	أغير تعابير وجهي عندما يقتضي ذلك تفاعل بين الثقافات.	BEH5

ثالثاً: استبيان القيادة المتعدّد العوامل

يساعدك هذا القسم في وصف أسلوبك القيادي كما تتصوّره. بدءاً بالسؤال الأول، حدّد وتيرة تلاؤم كل جملة معك. إذا لم يكن للبند صلة بك، أو إذا لم تكن واثقاً من الإجابة أو لا تعرف الإجابة، اتركه فارغاً. استخدم مقياس التقدير أدناه:

لا تتلاءم أبداً	نادراً	أحياناً	غالباً إلى حدّ ما	مراراً إن لم يكن دائماً
0	1	2	3	4

1. أقدم المساعدة للآخرين في مقابل الجهود التي يبذلونها
2. أعيد تفحص الافتراضات المهمة للتحقق مما إذا كانت ملائمة
3. لا أتدخل إلا عندما تصبح المشاكل خطيرة
4. أركز اهتمامي على التجاوزات، والأخطاء، والاستثناءات، والانحرافات عن المعايير
5. أتجنب التورط عندما تظهر مشاكل مهمة
6. أتحدّث عن أهم قيمي ومعتقداتي
7. لا أكون موجوداً عند الحاجة
8. أبحث عن وجهات نظر مختلفة عند حل المشاكل
9. أتحدّث بتفاؤل عن المستقبل
10. أغرس الاعتزاز لدى الآخرين لأنهم مرتبطون بي
11. أناقش عبارات محدّدة من المسؤول عن تحقيق أهداف الأداء
12. أنتظر وقوع الخطأ قبل اتخاذ إجراء
13. أتكلّم بحماسة عما يجب تحقيقه
14. أشدّد على أهمية امتلاك شعور قوي تجاه الهدف
15. أخصّص الوقت للتعليم والتوجيه
16. أوضح المرود المتوقع الذي يمكن الحصول عليه عندما تتحقّق أهداف الأداء
17. أظهر اعتقاداً ثابتاً بمقولة "إذا كانت الأمور على ما يرام، فلا داعي لتغييرها"
18. أتجاوز المصلحة الشخصية من أجل الجماعة
19. أعمل الآخرين بمثابة أفراد بدلاً من أعضاء في فريق
20. أظهر أن المشاكل يجب أن تصبح مزمنة قبل أن أتخذ إجراء
21. أتصرّف بطرق تزيد من احترام الآخرين لي
22. أركز كل اهتمامي على التعامل مع الأخطاء، والشكاوى، والفسل
23. أفكر في العواقب الأخلاقية والمعنوية للقرارات
24. أتابع جميع الأخطاء
25. أظهر الإحساس بالقوّة والثقة
26. أعبّر عن رؤية مقنعة للمستقبل
27. أولي اهتمامي للفسل في تحقيق الأهداف
28. أتجنب اتخاذ القرارات
29. أعتبر أن للفرد احتياجات، وقدرات، وطموحات مختلفة عن الآخرين
30. أفتح الآخرين بالنظر في المشاكل من زوايا مختلفة
31. أساعد الآخرين في تطوير مواطن قوتهم
32. أقترح طرقاً جديدة للنظر في كيفية إنجاز المهام
33. أوّجّل الإجابة عن الأسئلة الملحة
34. أشدّد على أهميّة امتلاك إحساس جماعي بالمهمة
35. أعبّر عن الرضا عندما يفي الآخرون بالتوقّعات
36. أعبّر عن الثقة بأن الأهداف ستتحقق

رابعاً: بيانات إحصائية

بيانات إحصائية									
غير مواطن		مواطن إماراتي		ما جنسيتك؟		1 إذا كنت غير مواطن، الرجاء الإشارة إلى أصولك:			
أميركي/ كندي		عربي							
أوروبي		أفريقي							
استرالي / نيوزلندي		آسيوي							
		أخرى، اذكر							
مدرسة خاصة		مدرسة حكومية		ما نوع المؤسسة التي تعمل فيها؟					
فوق 65		55-46		26-		18-		3	
				35		25			
أنثى		ذكر		ما جنسك؟					
خريج كلية		ثانوية عامة		5 ما هو أعلى مستوى تعليمي أكملته؟					
شهادة ماجستير		شهادة بكالوريوس							
تدريب فني/مهني		دكتوراه							
		أخرى، اذكر							
3-5 سنوات		2-0 سنة		6 كم عدد سنوات خبرتك في الإدارة/القيادة؟					
20-11 سنة		10-6 سنوات							
		أكثر من 20 سنة							
الإنجليزية		العربية		7 ما هي لغتك الأم؟					
الفرنسية		الألمانية							
أخرى، اذكر		الإسبانية							
1		0		8 كم عدد اللغات غير لغتك الأم التي تتحدثها بطلاقة؟					
3		2							
5		4							
روضة أطفال		حضانة		9 ما مستوى المؤسسة التي تعمل فيها؟					
مدرسة متوسطة		مدرسة ابتدائية							
روضة أطفال إلى مدرسة ابتدائية		ثانوية							
روضة أطفال إلى متوسطة		روضة أطفال إلى ثانوية							
		أخرى، اذكر							
6 إلى 10 جنسيات		أقل من 5		10 كم عدد الجنسيات الممثلة بين الموظفين الذين يعملون تحت قيادتك؟					
16 إلى 20 جنسية		11 إلى 15 جنسية							
		أكثر من 20 جنسية							
3-1		لا يوجد		11 كم عدد البلدان التي زرتها؟					
10-5		5-3							
		أكثر من 10							
للسياحة		للمعمل		12 ما كانت أغراض زيارة هذه البلدان؟ الرجاء تحديد أكبر عدد ممكن منها					
الانتقال للعيش		للدراة							
		أخرى، اذكر							
لا		نعم		13 هل عملت/عشت في بلدان أخرى؟					
3-1		أقل من سنة							

10-5	5-3	إذا كانت الإجابة نعم، كم بلغت طول مدة عملك/عيشك في بلدان أخرى؟
	أكثر من 10	

شكراً لك على إكمال الاستبيان. إذا كنت راعياً في الاشتراك في مقابلة هاتفية تستغرق 10 دقائق في الوقت الذي يلائمك لمتابعة بعض الإجابات، الرجاء الإشارة بعلامة في المربع.

نعم، أرغب في المشاركة في مقابلة هاتفية مدتها 10 دقائق.	
--	--

الاسم: _____

اسم المدرسة: _____

البريد الإلكتروني: _____

الهاتف: _____

Appendix 7 – Overview of empirical studies using CQS

Authors	Sample	Reliability and validity test	Remarks
<i>Type 1: comparative studies</i>			
Ang <i>et al.</i> (2007), scale development; Ang and Van Dyne (2008)	Singapore and USA	Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural equivalence: configural, metric, covariance	No test for scalar invariance; means cannot be compared across countries
Ang <i>et al.</i> (2007), study 1	Singapore and USA	Study 1 Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural validity: not reported	Configural invariance assumed; the 20 CQS items are used for the same dimensions, but no cross-cultural equivalence test, so results cannot be compared across cultural groups
Imai and Gelfand, (2010), study 1	Caucasian/white (58%), Asian-American/Pacific Islander (31%), others (11%)	Reliability: yes Convergent validity: yes Discriminant validity: not reported Cross-cultural equivalence: not reported	Four-dimension structure of the CQS established with pooled data. No cross-cultural equivalence test, so results cannot be compared across cultural groups
Imai and Gelfand (2010), study 2	USA and East-Asia (China, Japan, and Korea)	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural equivalence: not reported	No cross-cultural equivalence test, so results (including means) cannot be compared across cultural groups
<i>Type 2: single-country/culture studies</i>			
Oolders <i>et al.</i> (2008) ^a	New Zealand	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: no	No cross-cultural equivalence test, so results cannot be compared to results from other countries
Amiri <i>et al.</i> (2010)	Iran	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: no	Configural equivalence is assumed but not reported for the 20 CQS items. No cross-cultural equivalence test, so results cannot be compared to results from other countries
Vedadi <i>et al.</i> (2010)	Iran	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: no	Configural equivalence is assumed but not reported for the 20 CQS items. No cross-cultural equivalence test, so results cannot be compared to results from other countries

(continued)

Authors	Sample	Reliability and validity test	Remarks
Lee and Sukoco (2010)	Taiwan	Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural validity: not reported Reliability: yes Convergent validity: yes Discriminant validity: yes	No measure of metacognitive CQ and limited number of items (9), so configural equivalence is not achieved. No cross-cultural equivalence test, so results cannot be compared to other countries No cross-cultural equivalence test, so results cannot be compared to results from other countries
Moon (2010)	Korea	Reliability: yes Convergent validity: yes Discriminant validity: yes	Configural equivalence is assumed but not reported for the 20 CQS items. No cross-cultural equivalence test, so results cannot be compared to results from other countries
Chen <i>et al.</i> (2011)	Philippines	Reliability: yes Convergent validity: yes Discriminant validity: not reported Cross-cultural validity: no	Configural equivalence is assumed but not reported for the 20 CQS items. No cross-cultural equivalence test, so results cannot be compared to results from other countries
Eisenberg <i>et al.</i> (2013), study 1	Australian students	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: no	Configural equivalence is assumed but not reported for the 20 CQS items. No cross-cultural equivalence test, so results cannot be compared to results from other countries
<i>Type 3: mixed (or pooled) sample studies</i>			
Adair <i>et al.</i> (2013)	Culturally homogeneous teams and culturally heterogeneous teams	Reliability: yes Convergent validity: no Discriminant validity: no Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Ang <i>et al.</i> (2006)	Multiethnic and multicultural group of students in Singapore	Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural validity: not reported	Configural equivalence is achieved for the 20 CQS items. Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Templer <i>et al.</i> (2006)	India, South-East Asia, other Asian countries, Europe, America and Canada, Australia and New Zealand, other nations	Reliability: yes (MOT only) Convergent validity: not reported Discriminant validity: no Cross-cultural validity: not reported	Configural equivalence is achieved for the five MOT items. Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Ang <i>et al.</i> (2007), study 2	International managers from 17 different countries	Reliability: yes Convergent validity: yes	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization

(continued)

Authors	Sample	Reliability and validity test	Remarks
Ang <i>et al.</i> (2007), study 3	International professionals from 12 different countries	Discriminant validity: yes Cross-cultural validity: not reported Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Ang and Van Dyne (2008), study 6 ^a	Singapore and US pooled	Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural equivalence: configural, metric, covariance	No test for scalar invariance; the sample cannot be pooled without standardization
Kim <i>et al.</i> (2008) ^a	White American, Latino American, African American, and others	Reliability: yes Convergent validity: yes Discriminant validity: not reported Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Rockstuhl and Ng (2008)	Respondents from 19 countries	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Shannon and Begley (2008) ^a	Respondents from 24 different countries	Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Shokef and Erez (2008) ^a	Israel, Hong Kong, Spain, South Korea, and USA	Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Tarique and Takeuchi (2008) ^a	Mixed group of respondents	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization

(continued)

Authors	Sample	Reliability and validity test	Remarks
Groves and Feyrertherm (2011)	Respondents from the USA, China, Mexico, Philippines, Salvador, Saudi Arabia, Vietnam, Armenia	Reliability: yes Convergent validity: yes Divergent validity: yes Cross-cultural validity: not reported Reliability: yes Convergent validity: yes Discriminant validity: not reported Cross-cultural validity: not reported	Configural equivalence is assumed but not reported for the 20 CQS items. Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization 14 items of three CQ factors (MET, MOT, and BEH) show configural equivalence for these dimensions only. Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
MacNab and Worthley (2012)	Respondents from 30 different countries	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: not reported	Configural equivalence seems to be achieved for the 20 CQS items. Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Ward <i>et al.</i> (2011)	Respondents from 25 different countries	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: not reported	Configural equivalence seems to be achieved for the 20 CQS items. Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Wu and Ang (2011)	Respondents from European countries, Asian countries, North-America, and Australia	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: not reported	Four factors of CQ were averaged to form one overall CQ, but configural equivalence cannot be assumed
Rockstuhl <i>et al.</i> (2011)	Swiss respondents from multiple linguistic regions	Reliability: yes Convergent validity: yes Discriminant validity: not reported Cross-cultural validity: no	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Eisenberg <i>et al.</i> (2013), study 2	Group of mixed students from Europe and other countries	Reliability: yes Convergent validity: no Discriminant validity: no Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Erez <i>et al.</i> (2013)	Respondents from 12 countries	Reliability: yes Convergent validity: yes Discriminant validity: not reported Cross-cultural validity: no	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Huff (2013)	Expatriates in Japan from English-speaking countries	Reliability: yes Convergent validity: no Discriminant validity: no Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization

(continued)

Authors	Sample	Reliability and validity test	Remarks
Malek and Budhwar (2013)	Asian and non-Asian expatriates in Malaysia	Reliability: yes Convergent validity: yes Discriminant validity: yes Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Rosenblatt <i>et al.</i> (2013)	Respondents from 32 countries	Reliability: yes Convergent validity: not reported Discriminant validity: not reported Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization
Bücker and Korzilius (2015)	French and Dutch students	Reliability: yes Convergent validity: no Discriminant validity: no Cross-cultural validity: not reported	Cross-cultural equivalence is assumed but not tested, and the sample cannot be pooled without standardization

Note: ^aStudies published in the *Handbook of Cultural Intelligence* (Ang and Van Dyne, 2008)

Appendix 8 - Expanded CQ scale (the E-CQS)¹

E-CQS (Expanded Cultural Intelligence Scale) © 1

Motivational CQ

- Intrinsic Motivation** I truly enjoy interacting with people from different cultures.
- Intrinsic Motivation** I thrive on the differences in cultures that are new to me
- Intrinsic Motivation** Given a choice, I prefer work groups composed of people with different (rather than similar) cultural backgrounds.
- Extrinsic Motivation** I value the status I would gain from living or working in a different culture.
- Extrinsic Motivation** Given a choice, I value the tangible benefits (pay, promotion, perks) of an intercultural rather than a domestic role.
- Extrinsic Motivation** I value the reputation I would gain from developing global networks and connections.
- Self-Efficacy to Adjust** I am confident that I can persist in coping with living conditions in different cultures.
- Self-Efficacy to Adjust** I am sure I can deal with the stresses of interacting with people from cultures that are new to me.
- Self-Efficacy to Adjust** I am confident I can socialize with locals in a culture that is unfamiliar to me.

Cognitive CQ

- Culture General Knowledge** I can describe the different cultural value frameworks that explain behaviors around the world.
- Culture General Knowledge** I can describe similarities and differences in legal, economic, and political systems across cultures.
- Culture General Knowledge** I can describe differences in kinship systems and role expectations for men and women across cultures
- Culture General Knowledge** I can describe different views of beauty and aesthetics across cultural settings.
- Culture General Knowledge** I can speak and understand many languages.

- Context-Specific Knowledge** I can describe the ways that leadership styles differ across cultural settings.
- Context-Specific Knowledge** I can describe how to put people from different cultures at ease.
- Context-Specific Knowledge** I can describe effective negotiation strategies across different cultures.
- Context-Specific Knowledge** I can describe different ways to motivate and reward people across cultures.
- Context-Specific Knowledge** I can describe effective ways for dealing with conflict in different cultures.

Metacognitive CQ

- Planning** I develop action plans before interacting with people from a different culture.
- Planning** I think about possible cultural differences before meeting people from other cultures.
- Planning** I ask myself what I hope to accomplish before I meet with people from different cultures.
- Awareness** I am aware of how my culture influences my interactions with people from different cultures.
- Awareness** I pay attention to how cultural aspects of the situation influence what is happening in that situation.
- Awareness** I am conscious of how other people's culture influences their thoughts, feelings, and actions.
- Checking** I adjust my understanding of a culture while I interact with people from that culture.
- Checking** I double check the accuracy of my cultural knowledge during intercultural interactions.
- Checking** I update my cultural knowledge after a cultural misunderstanding.

Behavioral CQ

- Verbal Behavior** I change my use of pause and silence to suit different cultural situations.

Verbal Behavior	I vary my verbal behaviors (accept, tone, rate of speaking) to fit specific cultural contexts.
Verbal Behavior	I modify the amount of warmth I express to fit the cultural context.
Non-Verbal Behavior	I modify how close or far apart I stand when interacting with people from different cultures.
Non-Verbal Behavior	I change my non-verbal behaviors (hand gestures, head movements) to fit the cultural situation.
Non-Verbal Behavior	I vary the way I greet others (shake hands, bow, nod) when in different cultural contexts.
Speech Acts	I modify the way I disagree with others to fit the cultural setting.
Speech Acts	I change how I make requests of others depending on their cultural background.
Speech Acts	I vary the way I show gratitude (express appreciation, accept compliments) based on the cultural context.

1 © Cultural Intelligence Center, 2011. Used by permission of the Cultural Intelligence Center, LLC.

Note. Use of this scale is granted to academic researchers for research purposes only. For information on using the scale or items for purposes other than academic research (e.g. consulting, program evaluation, non-academic organizations), send an email to cquery@culturalq.com

For more information, see Van Dyne, L., Ang, S., Ng, K.Y., Rockstuhl, T., Tan, M. L. & Koh, C. (2012). Subdimensions of the four factor model of cultural intelligence: Expanding the conceptualization and measurement of cultural intelligence. *Social and Personality Psychology Compass*, 6/4, 295-313. See also <http://culturalq.com>

Appendix 9: Expert Interview: Summary Report

Please note that the research questions and objectives in the appendix are from 2014 and have subsequently changed.

Date: 8th May 2014

Location: Centre for Innovation Research in Cultural Intelligence and Leadership (CIRCQL), Nanyang Business School, Nanyang Technological University of Singapore.

Attendees: Ali Al Dhaheri (Doctoral Researcher), Prof. Ang Soon (Executive Director), Dr. Thomas Rockstuhl (Researcher)

I. Introduction:

The main objective of the expert's interview was to validate the research aims, objectives, questions, hypotheses and research methodology.

Prof. Ang and her team had a copy of the research proposal prior to the meeting. The discussions systematically focused on each section of the research proposal. Overall, the feedback was very positive and many useful insights were gained, all of which are detailed in this document.

All conversations were recorded with the permission of the participants and will be transcribed directly in due course. Below is the set of pre prepared questions. Such was the informal nature of the meeting that it was not possible to ask all questions in a set manner. Instead, detailed answers were derived from the natural discussions which took place. Below is a brief summary of the key recommendations:

II. Summary of Key Recommendations:

- Overall, Prof. Ang was supportive of the proposal and felt that there was value in it. She advised that all recommendations be communicated to the PhD supervisor as he is ultimately in charge of the direction of the research and that she and her team will lend support wherever possible.
- RQ1 RQ2 RQ3 can be answered but she has doubts that RQ4 can be answered at this stage as there is no clearly defined measure for the leadership adaptability. A main recommendation was to go back to the literature in order to find a suitable measure for leadership adaptability.
- RQ4 can be answered without a qualitative approach. If the supervisor accepts to drop the follow up interviews.
- However, she felt that RQ3 and RQ4 had more depth and potential contribution.
- It is Important to use focus groups to adapt the existing measures to the context. Follow up interviews may or may not be necessary.
- There are major issues relating to the use of self-report. If it must be self-report then the researcher must be able to mitigate it in some way. If possible it is better to include peer reporting as this will add to the overall credibility of the data
- Prof. Ang was not hopeful that a systematic review of the literature carried out by the researcher would make it to publication.

III. Questions on Objective of this Study

1. Having looked at the literature, are you aware of any studies that I have missed in terms of major studies?

Answer:

It was recommended to review an article by K. Groves, which relates to the measurement of leader CQ and its impact on followers. This article includes outcomes from the followers and focuses on how the leader is viewed from a follower perspective.

The MLQ doesn't have the adapted leadership component. Need to look in the literature and find the literature on leadership adaptability.

2. Cultural Intelligence can increase the capability of the leader to manage diverse people. So therefore can I assume that high level of CQ will enable the leader to adjust their leadership style to deal with diverse workforce?

Answer:

Care must be taken to make sure that the correlation between leadership style and CQ is as a result of CQ and not some other factor.

Leaders will often revert to the style that they are most comfortable with. If a leader is strongly transformational he may be unable to display a range of other leadership styles.

3. I also assume high levels of CQ will enable managers to adjust their leadership style within a particular situational context. Do you accept this rationale?

Answer:

Care must be taken to make sure that the correlation between leadership style and CQ is as a result of CQ and not some other factor. Must control for individual differences e.g international experience.

4. Are you aware of any other studies that have also explored relationships between CQ and leadership style and in particular the impact of CQ on the leader's ability to adapt their leadership style?

Answer:

An unpublished Iranian study (2009), looked at the relationship between leadership style and CQ among middle managers in the Oil and Gas Industry. The used both local and expatriate managers. This study utilised the MLQ and a shorter modified version of the CQS that was adapted to suit the context. The scale was expanded beyond the 20 items to make it more suited to a leadership setting. The results showed there was strong evidence that CQ was a predictor of transformational leadership, and laissez faire leadership but not so much transactional.

Transformational leadership does not vary for CQ among Iranian leaders. For expat leaders, the higher the CQ, the higher the transformational leadership style. The higher the CQ the less they use laissez fair leadership.

5. Are you aware of anyone else undertaking such a study right now which is linking CQ to leadership style adaptability?

Answer:

No.

6. In your opinion, is there a need for such a study? Yes / No? Why?

Answer:

Yes, there is value in this study

IV. RQ1 - What is the average level of CQ of School leaders?

Overall, Prof. Ang is not in favour of this research question as the findings may stigmatise Abu Dhabi school leaders if they are found to have lower levels of CQ. They don't like to report CQ as an average for sensitivity reasons.

7. Regarding the CQS, are there any definition in the literature which explains the levels of CQ in relation to the scale weightings 1-7?

Answer:

No, Refer to initial CQ Validation article for information on scale development.

8. Which scale range is considered to be high / medium / low?

Answer:

They do not consider it to be in absolute terms. They prefer to use the terms higher or lower CQ in relation to another factor. E.g higher in CQ but lower in performance. This keeps it relevant.

9. Do you have any references to support the definitions of low, medium, and high CQ?

Answer:

No, due to reasons stated above.

10. Is there a consistent or accepted range used in academic research?

Answer:

For the purposes of the CQS and ECQS they use the values 1-7, but when interpreting the results they prefer not to report these values in absolute terms. They prefer to use the terms higher or lower CQ.

11. If you do not know can I assume that:

- 1-2 is low?
- 3-5 is medium?
- 6-7 is high?

Answer:

They do not use a cut-off point or range. This is because different response sets will be found in different ranges. Western samples always use the full range as they are more confident in reporting their CQ capabilities, while Asian samples are usually found between 3-5, as they tend to underscore their abilities. This then requires the researcher to make adjustments for the research sets. When reporting CQ scores they do not report it as a number even if they may know it as particular number for statistical purposes. They describe is as being either higher or lower CQ when interpreting data.

12. For benchmarking our results - What is the mean from previous studies? What is the Standard Deviation from previous studies?

Answer:

The worldwide mean is about 5 but they do not like to report a mean score as it will be flawed depending on the response set. For example, if you look at locals and Nationals, the locals response set may be narrower than the expatriates so their lower CQ level could be explained by the narrower response set. They prefer to talk about it in terms of a relationship between CQ and something else. They therefore advise to change the language used from low, medium and high to higher and lower CQ.

13. Are the results normally distributed across countries / industries?

Answer:

No, the nature of the response set and how they respond which will skew all results For example, western samples sets will always use the entire scale 1-7 as by nature they are more likely to score themselves higher. Asians, will always score themselves more conservatively and so will normally be found between scores 3-5.

14. Do you have a database from which I can validate our results? If so, can I have access to it?

Answer:

No, they do not give out data relating to different countries or individuals as it may be too sensitive in nature. They do not like to say one country's CQ is this level as compared to another country's CQ level. It is also flawed to compare country by country due to the difference in response set. They use the terminology higher and lower CQ when describing within a particular sample set.

15. Can I assume that the results from this study will follow the patterns from previous studies? Why?

Answer:

It is not guaranteed, due to the difference in context i.e. different country, sector and functional background of sample set.

V. RQ2 - What is their Predominant leadership style profile?

Overall, Prof. Ang is not in favour of this question as it will not be easy to answer directly. Respondents may exhibit a range of all 3 leadership styles and depending on the data the leadership style will be based on an average score over the 3 styles. She

recommends to change the wording of the question to something that can be answered more easily e.g. What is the average score regarding leadership style?

Prof. Ang feels that self-report will be a major flaw in the research and encourages wherever possible to use followers also.

Prof. Ang advised that the MLQ5X would need to be adapted to suit the context and has advised that the researcher seek permission to make changes. She was not optimistic that the authors would allow it to be adapted. Any instrument you buy in is fixed and you then cannot cross validate it against previous studies. She also advised that the MLQX is mostly implemented in practical settings and not in academic settings.

VI. RQ3 - What is the Predominant leadership style and its corresponding level of CQ of school leaders?

Prof Ang recommends to drop RQ1 and RQ2 and make RQ3 a more in depth question. For example “ What is the relationship between the MLQ and CQ. This would involve a lot of controls and so would be a major piece of work.

16. I know that high level CQ leader’s exhibit transformational leadership style, which been researched and presented in other studies (Keung and Rockinson, 2013).

Answer:

You Have to be careful when trying to identify the correlation between CQ and transformational leadership. Will CQ predict beyond what we already know. e.g. When trying to predict transformational leadership from CQ there are some other controlling factors such as, if they are higher up the ranks in terms of managerial level they will be more transformational. It may also be the case that people who are higher in managerial levels are higher in CQ so it may not be about the CQ, it may be about managerial levels. Therefore, you must control for all potential differences.

17. Based on this can I assume that medium level of CQ will link to transactional style, and low level of CQ will link with passive / avoidant style?

Answer:

It is a correct assumption that the higher the CQ the more transformational the leadership style and the lower levels of CQ the more lassiez faire style of leadership.

VII. RQ4 - What is the impact of CQ on the ability of The School leaders to adapt their Leadership style?

- Prof. Ang agrees that this is the most novel and interesting part of the research but that it is also the most difficult to answer. At present we are unsure as how to measure the adaptability. She recommends going back into the literature in order to see if there is an existing measure that can be used. She also said that it may be the case that RQ4 does not need a qualitative element. You may be able to add 3 or 4 items to the scale relating to style adaptability.
- She also recommends adding some words to the question in order to convey the fact that this is leadership adaptation in a multicultural context.

- She stressed the need to find out what this leadership style means on the ground for actual school principals by looking at the nature of their interactions with different stakeholders.
- Ask yourself, what does the process of adapting actually mean, from what style to what style. How does a leader become a chameleon, in other words how do they actually change their style. This will be important to investigate in the focus group.

18. Looking at the entire project, is there anything you feel needs changing / amending / adding ? If yes, why?

Answer:

The issue of the self-reporting is a major flaw and will impact the strength of the data. There is no defined scale to measure the leadership adaptability. This is a major problem at this stage. It is recommended that a further literature search is carried out in order to find a suitable measure.

19. In your view, what are the theoretical, methodological and practical contributions that this research potentially delivers? How does this research fill part of the gap in the literature?

Answer:

An intervention will deliver a more powerful contribution both academically and practically. As it stands there is very little in terms of real contribution except for investigating CQ in a new context. If RQ4 can be developed then there may be some useful contribution.

VIII. Research Methodology

20. Do you think this research methodology is the best approach for this research? And why?

See Below

IX. The Focus Group:

21. Do you think the focus group is the right method to develop the additional questions? If not what is the right method.

Answer:

- For the focus group it is essential that you choose the right sample. You need to Interview people who have a reputation for being a very good leaders and also very bad leaders.
- In the focus group there is a real need to prime the leaders to think about cross cultural interactions.

- Need to ask them to describe their leadership style remembering that leadership effectiveness is related to task and relationship aspects. Ask them to describe their experiences. Can use Critical Incident Technique.

22. Is 10 participants a good sample size?

Answer:

- One on One interview with 12 individuals who have been carefully selected. Aim to go for reputation of either the school or principle. Need to capture the full range of leaders.
- People are judged on 2 dimensions, their warmth and their competence. You will get 4 variations: Warm & Competent leaders, Warm & Not Competent leaders, Not Warm & Competent leaders, Not warm & Not competent leaders. Need around 3 from each of these categories for triangulation purposes.

23. What type of questions do I need to ask the participants in order to develop the additional questions?

Answer:

- Questions which draw out their actual leadership experience. What they did that was good and what they did that was bad? How did they deal with intercultural conflict of any kind?
- Use technique called Critical Incidence technique.
- Argument for using the E-CQS as opposed to the CQS: the ECQS allows the instrument to be customized to the role that you are playing, in an intercultural setting and so it is important to point out that the original CQS was not developed in this setting. It was developed to be used for personal use.

X. Survey – CQS + MLQ + Additional Questions + Demographic section:

- Regarding the diversity of the school. We have to think about the context: How diverse is the school in terms of teacher diversity and student diversity. Must think about diversity markers: nationality, gender religion and functional background. Must read body of literature on surface levels and deep level diversity.
- When asking respondents to give numbers, let them put the number to avoid variance problems later on. Don't give them a range.
- Provide a list of common nationalities and let them just tick. May be issues over origin and nationality.
- Ang recommended doing a pilot survey to see how these demographic questions will be answered.
- Offer an incentive to promote respondent participation.

24. Do you think that this is the correct approach? And why?

Answer:

The correct approach depends on solving the issues with the research objectives.

25. Do you think I have covered everything?

Answer:

Need to amend the MLQ (as discussed previously).

Need to measure leadership adaptability (as discussed previously).

Appendix 10 – Leadership Theories

8.1 Great Man Theory

This theory was probably the first leadership theory and was included by Bass as one of his Personal and Situational Theories. Before Bass, it was referred to by Machiavelli (1961) and Weber (1925) who suggested that chiefs rule naturally. The Great Man Theory became more structured with the formal study of leadership and was popular with researchers and writers in the late 19th and early 20th centuries. The theory suggested that leadership qualities were inherited and that leaders were more likely to derive from upper classes of society. It was claimed by Kirkpatrick and Locke (1991) that great men are born, not made. A conclusive survey and analysis of Great Man Theory was carried out in the early 1960's by Jennings (1960), who found no evidence to support its existence. This signaled the end to its prominence, and in the second half of the 20th Century, the Great Man Theory evolved into Trait Theory.

Kirkpatrick and Locke (1991) claimed that whilst the Great Man Theory was considered by most to be outdated, the concept was used on a regular basis to foil or discredit more modern, so-called, superior theories. They suggested that, despite the lack of empirical evidence, it can be seen that some people do appear to be natural leaders, and some appear to be natural followers. Despite Jennings's efforts to disprove the existence of Great Man Theory, it still survives, and when other explanations of leadership fail, many revert to this as the answer.

It can be argued that the existence of the Great Man Theory is based more on intuition than on empirical evidence. However, even without hard empirical evidence, it can be seen that there have been individuals, such as Gandhi, Lincoln, Churchill, Kennedy, and other world leaders who had an innate ability to lead.

8.2 Trait Theory

Trait theories fall into the Bass's Personal and Situational Theories group. They refer to people's general characteristics, such as physical and mental capabilities, motives and behavioural patterns. Trait Theory differs from Great Man Theory in as much as it does not make any assumption that traits are inherited or acquired. Within the general group of the so-called Trait theories, there are many individual theories which are subtly different to the main theme. Hunter and Jordan (1939) looked at physical characteristics such as height and weight, whereas Pigors (1933) looked at aspects such as age. Early research into leader traits suggested that leaders were younger, taller, stronger, more intelligent and more self-confident than followers. However, later studies have failed to provide any empirical evidence to support this, and by the middle of the century, the concept was being questioned.

A major contributor to the study of Trait theory was Stogdill (1948). Prominent in the mid-20th century, he conducted two major investigations into the literature on Trait Theory. He focused on studies that had looked specifically at traits or personal factors of leaders and claimed that, despite his investigation into numerous research projects and their findings, he could not find any evidence to support the theory. He noted that the number of investigations into certain specific traits was not indicative of the importance of that trait. The Stogdill (1948) study, which comprised statistical analysis of the results of other researchers, concluded that an individual could not be automatically considered a leader just because they have a certain number of traits normally associated with leadership. He suggested that research had shown that there were no traits universally present in effective leaders, and situational factors were the major influence. This claim by Stogdill that researchers into the Trait Theory had failed to provide conclusive evidence was supported later by Jennings (1960) who also could find no empirical link.

Despite Stogdill failing to find any conclusive evidence, Trait Theory has experienced a comeback in more recent times. Hence, Bass (1990) suggested that, whilst leader traits may not be the complete answer to successful leadership, a large percentage of leaders who are successful do exhibit certain core traits such as confidence and drive. This is a view supported by Hersey et al. (1996) and Kirkpatrick and Locke (1991).

Kirkpatrick and Locke (1991) employed a variety of methods of empirical research, and they found evidence indicating that the most common traits of successful leaders were ‘drive, leadership, motivation, honesty and integrity, self-confidence, cognitive ability, and knowledge of the business’. Of these, honesty and integrity appeared to be the most important and common. Youngjohn (1999) agreed with this finding. Stogdill (1974) revisited his previous study some thirty years later and again concluded that there was still no conclusive evidence to support Trait Theory. However, he argued that there were certain traits that increased the likelihood that those leaders, who had them, would be more successful at their role. These included ‘determination, persistence, sociability, and interpersonal skills’, and these suggested that trait theory could still provide part of the answer to what makes an exceptional leader. This view was supported by House and Podaskoff (1994) who suggested that traits are more related to the perceptions of leadership. Thus they may be useful in distinguishing between leaders and followers but not in distinguishing between successful and less successful leaders.

Stogdill (1948)	Mann (1959)	Stogdill (1974)	Lord, DeVader, and Alliger (1986)	Kirkpatrick and Locke (1991)
Intelligence	Intelligence	Achievement	Intelligence	Drive
Alertness	Masculinity	Persistence	Masculinity	Motivation
Insight	Adjustment	Insight	Dominance	Integrity
Responsibility	Dominance	Initiative		Confidence
Initiative	Extroversion	Self-confidence		Cognitive ability
Persistence	Conservatism	Responsibility		Task knowledge
Self-confidence		Cooperativeness		
Sociability		Tolerance		
		Influence		
		Sociability		

Figure 1: Traits Theory of Leadership: Key Contributions (Northouse, 2007)

Northouse (2016) identifies the five major leadership traits to be ‘Intelligence, self-confidence, determination, integrity and sociability’. He argues that Intelligence is a trait that relates positively to Leadership and so can greatly impact a person’s ability to be an effective leader. This is a belief that is of major significance in this thesis as the role of cultural intelligence is linked with leadership style adaptability.

More recently, the trait theory has also found application in the Big Five Factor personality model. This model identifies 5 traits that make up personality. Studies carried out by Judge et al (2002) found that there were certain personality traits that correlated to leadership effectiveness. They are: ‘Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness’ (Northouse, 2016). In particular, extraversion was most positively correlated with leadership effectiveness, followed in order of significance by conscientiousness, openness, neuroticism and agreeableness (Northouse, 2016).

Overall, the trait theory is appealing as the list of attributes it identifies, generates the image of a leader as a person with unique characteristics. It also focuses solely on the leader and does

not take into account the impact of followers or situational factors, although this in itself can also be described as a weakness of the theory. The trait theory is also one of the most widely researched leadership theories and the role of personality traits in leadership is widely accepted (Northouse, 2016). The criticisms of trait theory are mainly due to the fact that despite extensive research there is still no definitive list of desirable leadership traits. Nor has much research been carried out relating leadership traits and leadership outcomes. Practically, it has also been stated that teaching or learning new traits is not an easy process and so may have limited application in the training and development of leaders.

8.3 Theory X and Theory Y

McGregor (1960) introduced Theory X and Theory Y which went on to become a well-known leadership theory. Theory X and Theory Y falls under the umbrella of Bass's Humanistic Theory group and is one of the Autocratic and Authoritarian versus Egalitarian paradigms (Bass, 1990).

McGregor's (1960) Theory X and Theory Y suggested the existence of two types of organisational leadership. Each had distinctly separate behaviour patterns which are shown in Figure 3.

Theory X Leaders Assume		Theory Y Leaders Assume	
1	Employees inherently dislike work and whenever possible will attempt to avoid it.	1	Employees can view work as being as natural as rest or play.
2	Because employees dislike work, they must be coerced, controlled, or threatened with punishment to achieve desired goals	2	Men and Women will exercise self-direction and self-control if they are committed to the objectives.
3	Employees will shirk responsibilities and seek formal direction whenever possible.	3	The average person can learn to accept, even seek responsibility.

4	Most workers place security above all other factors associated with work and will display little ambition.	4	The ability to make good decisions is widely dispersed throughout the population and is not necessarily the sole province of managers.
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Table: 1 McGregor's Theory X and Theory Y

Leaders of Theory X organisations needed to display different behaviours to leaders of organisations falling into the Theory Y classification. Theory X required leaders who tended more towards the management philosophy of direction and control. Alternatively, Theory Y leaders sought to develop the employees' skills and knowledge and to release their potential to achieve the common goals. McGregor's theory was supported much later by Hall and Donnell (1979), whose research involved five different research studies of over twelve thousand managers. They found that there were two opposing leadership styles and that managers whose career advancement was the fastest were least likely to subscribe to Theory Y. Those whose career was advancing the slowest were most likely to subscribe to Theory Y. However, despite Theory X and Theory Y being the subject of a number of management books, the concept possibly oversimplifies the issue of leadership by suggesting that there are only two alternatives, either leading by directing or leading by trusting subordinates to do their best. It further suggests, in simple terms, that followers are either workers or shirkers, and this ignores a whole range of more complex issues and behaviours.

It is clear that whilst Theory X and Theory Y have had a large following, this theory appears to come more from the management practitioners than from academics. Whilst this does not detract from its validity, it appears to have been a leadership theory 'of its time'.

8.4 Theory Z

By proposing Theory Z, Ouchi (1981) suggested a contrast to McGregor's Theory X and Theory Y. This was classed as a 'task vs. relations-oriented' management style in Bass (1990).

Ouchi proposed that the most suitable style of leadership was the one adopted by the leaders of successful Japanese organisations. He claimed that it was less to do with leadership per se and more to do with the organisation's deep-rooted beliefs which emanated from the leader. It focused on cultural issues including the following:

- Long-term employment
- Open communication patterns
- Harmonious work group or consensus decision making
- Slow evaluation and promotion
- Holistic concern for employees

These cultural issues were at the core of the Japanese organization, and Ouchi suggested that success was a result of organisational culture and not leadership. However, it was argued that the leadership within these organisations was what had created the organisational culture. Ouchi did acknowledge this, and he went on to suggest that the Theory Z leader/manager focused on creating an organisation with these deep-rooted beliefs which in turn brought with it organisation success. What Ouchi did not consider in his Theory Z was the ethnical and geographical time-related phenomena. Thus, whilst the five cultural issues worked well for Japanese organisations in the 1970s, 1980s, and early 1990s, they started to falter with the rise of other Far Eastern economies. With the decline in the Japanese dominance in world business, these values appear to have been lost.

8.5 Situational Theory

Situational Theory emerged in the late 1920s and 1930s and existed in parallel with Trait Theory. It came to prominence in the 1960s with the fall from popularity of the Trait Theory and falls within the Bass (1990) Personal-Situational Theory group.

Situational Theory suggests that great leaders arise when there are great events. Murphy (1941) claimed that the number of great national leaders correlates with the number of great national events. Prior to the formulation of Situational Theory, Bogardus (1918) claimed that the type of leadership that developed in a group was dependent upon the problems that it had to solve. The high point of Situational Theory popularity appears to have been led by Hersey and Blanchard (1972), who suggested that leaders could (a) match their style to the maturity of the followers and (b) that the way they led was contrived and not innate. In other words, different situations would require a different leadership approach and an effective leader would be able to adapt his/her leadership to that given situation (Northouse, 2016).



Figure 2: The Situational Leadership Model (Blanchard et al, 2005).

This appears to have been a significant moment in leadership theory as the emphasis shifted from inborn/innate style of leadership suggested by Great Man and Trait Theories to learnt or contrived actions. Hersey and Blanchard (1981) were attracted to the general idea of Situational Theory since their research and interests were focused on the measurement and explanation of leader behaviour when faced with specific situations. It was suggested by Hersey and Blanchard (1972) that the maturity of the followers had two parts: firstly,

psychological, which related to the individual's self-confidence; and secondly, a willingness to accept responsibility, which related to the individual's skills and knowledge. They suggested that as a follower's maturity increased, the leader needed to adopt a more relationship-based style. With less mature followers, the leader would have a more directive and task focused style.

According to Hersey and Blanchard (1977), four levels of maturity exist which give rise to four corresponding leadership styles. A follower could increase their status within the organisation by becoming more mature in their workplace behavior, and the objective of all leaders should be to increase the maturity of the organisation to the highest level.

Despite situational theories being dominant in the 1970s, Hambleton and Gwnpert (1982), using leader and subordinate questionnaires, failed to confirm Heresy and Blanchard's (1972) claim that Situational Theory was the answer to the leadership style question. As with Great Man Theory and Trait Theory, Situational Theory gave way to alternative theories.

Despite the lack of research supporting Situational Theory, it is reasonable to assume that leaders do give more direct instructions to new starters and less mature subordinates and that more autonomy and trust is given to the people that they know and trust. History also demonstrates that leaders appear to meet particular events. Without those events, the leader may not have become prominent or have been allowed to lead. On a national level, a particular example of this was Winston Churchill, who from 1939 to 1945 was possibly seen as a great leader because of the situation which allowed him to rise to power.

From the review of literature on Situational Theory, it is clear that this theory still has validity and has many strengths and it is well known from a practical viewpoint in the training and of leaders in the workplace. Its prescriptive nature is more useful in a variety of settings than other

more descriptive leadership theories. It also introduces the notion that leaders can exhibit flexibility in their leadership style in relation to their follower's needs and requirements in any given situation. Its weaknesses lie in the lack of supporting body of evidence, and the ambiguous conceptualization of the model (Northouse, 2016).

Various studies have shown that leadership behaviours, as promoted in the Hersey-Blanchard models, can have a negative impact on a particular group's efficiency and the satisfaction of the people being led (Bass & Bass, 2008). The Hersey-Blanchard model has also been criticised for its assumption of a direct, individual relationship between leader and led – a situation that many might struggle to identify in modern organisations.

An alternative view is to think of it as offering the potential to weigh situational factors to identify a suitable decision-making method. This changes its status from that of a theory on leadership, to something more like an organisational tool.

8.6 Normative Theory

Normative Theory falls into the Bass Perceptual and Cognitive Theory Group. It is a variation of Situational Theory and was promoted by Vroom and Yetton (1973) who disliked traditional management theories claiming that they were based on autocratic rule. However, long before Vroom and Yetton, Coch and French (1948) and Miller (1950) had claimed that their research, based on the observations of experiments on four different groups of subordinates, had shown that the use of a normative management style could bring about impressive increases in productivity.

Normative Theory was democratic in nature, involving followers and subordinates in the decision-making process. According to Vroom and Yetton (1973), there were five leadership

styles within three defined processes. Two of these leadership styles fall into what they described as Type 1 and three into Type 2 as shown in Figure 6:

	Type 1 Styles	Type 2 Styles
Autocratic Processes	The Leader makes all the decisions based on whatever information is available.	The Leader secures the necessary information from the group and then makes the decision in isolation.
Consultative Processes	The Leader shares the problem with members of the group on a one-to-one basis without getting them together and then he decides.	The leader shares the problem with the group at a joint meeting and then he decides.
Group Processes		The leader acts as a chairperson at a meeting and facilitates the group to reach consensus. The leader give information and express opinion but does not champion any particular course of action.

Table: 2 Vroom and Yetton's Leadership Style and Process Matrix

Vroom and Yetton (1973) went on to suggest that these five styles of leadership operated within seven possible situations and leaders should ask themselves ten questions to decide which would be the best style to adopt. Clearly, it can be seen that this theory is complicated relative to the other theories discussed so far and relies heavily on process, action and individual self-appraisal. Whilst Vroom and Yetton are widely cited, an examination of the literature suggests that Normative Theory has become a metaphor for involvement of subordinates in the decision-making process.

In conclusion, the review of the literature on Normative Theory leads to the suggestion that it is possibly the 'thinking man's' answer to leadership theory. This detracts from the perception

that leadership is something that is inherent rather than something that can be selected from a menu.

8.7 Contingency Theory

Fiedler's (1967) Contingency Theory is a variation of Situational Theory, and it is one of Bass' Interaction and Social Learning group. In this theory, leadership style is innate or inborn and leaders are either task or relations orientated by nature. This illustrates that whilst Fiedler was a situationalist, he considered that Trait Theory had some validity because Contingency Theory was a hybrid of Trait Theory and Situational Theory. Fiedler (1967), Fiedler (1971) and Fiedler et al. (1976) suggested that leaders exhibit one or two traits, and they are either task or relationship driven. He also suggested that there were three situational factors: 'leader/member relations, task structure, and leader power position'. The situational factors determined whether a task or relation approach was more appropriate. Thus, the effectiveness of task-oriented and relation-oriented leaders was dependent on the requirements of the situation.

Fiedler adopted the method used for assessing the task or relationship bias of individual leaders known as the least-preferred co-worker and suggested that the task-oriented leader would most likely be effective in situations that were at the extremes and personally most favourable or unfavourable to them. Conversely, the relationship leader would most likely be effective between the extremes. Much of Fiedler's research was undertaken on military personnel and involved qualitative analysis of data collected using questionnaires and the least preferred co-worker method.

The literature on Contingency Theory suggests that this is an amalgam of Great Man Theory, Trait Theory and Situational Theory and that a Contingency Leader used his innate skills in the most appropriate way relative to specific situations. The converse of this is that the leader who was not a Great Man or possessed the right traits would not have the innate skills to allow

him to be a Great Contingency Theory Leader. It suggests that in terms of leadership, there are qualifiers and winners. The innate skills are the qualifiers and the ability to use them in different situations is the winner. The strengths of this theory lie in the fact that it has been demonstrated to be a valid and consistent approach to leadership. It also has strong empirical foundations to support it. It has also addressed and emphasized the impact of the situation on the leader (Northhouse, 2016). Importantly, it has also highlighted that leaders need not to be all encompassing and that in reality they may not be able to lead in all situations.

The Fiedler (1967) version of Contingency Theory received considerable criticism primarily because of his use of the least preferred co-worker method to measure leadership style. This method was considered inappropriate by some (Ashour, 1973; Hunt and Larson, 1977). Fiedler's claim that leadership style was innate and inborn in leaders suggests that the only way to have a different style would be to change the leader. This limiting factor of innate and inborn leadership style was rejected by House (1971) who suggested the Path Goal Theory as a better alternative.

The Contingency Theory has been criticised on the assertion that it assumes a leader's leadership style is fixed. It has also been argued that, rather than encourage a leader to adapt their natural approach, the theory calls for particular situations to be manipulated.

The theory's Least-Preferred Co-Worker (LPC) Scale, which purports to measure a person's (fixed) leadership style, has also been queried by other researchers. A number of studies have suggested that the scale has around a 50 per cent reliable variance, along with questions over interpreting high and low LPC as correlating with relationships versus task orientation (Mitchell, Biglan, Oncken, & Fiedler, 1970).

8.8 Path Goal Theory

Path Goal theory, developed by House (1971), like Contingency Theory, was one of Bass's Interaction and Social Learning Theory group.

Whilst Fiedler (1967) focused on the link between the leaders, traits and situational variables, House considered leader behavior and situational variables. The difference between the two approaches appeared to be the focus on either leader traits or leader behavior; however, the theoretical background was far from simple. House (1971) saw Path Goal Theory in quantifiable mathematical terms where motivation was expressed as a numerical probability.

House (1971) claimed that leaders were effective because of their impact on the motivation on followers, their ability to work effectively, and their level of satisfaction. The key to having this level of impact was for the leader to influence the follower's perceptions of their work goals, personal goals, and pathways to achieving goals.

Hence, it was the leaders role to clarify the goals of the followers and then to identify the path to achieve them. To do this, the leader adopts a suitable style of behaviour in his work. House identified four different types of leader behaviour which were:

- Directive
- Participative
- Supportive
- Achievement oriented

These behaviours of the leader are similar to the styles suggested for Fiedler's Situational Theory. Both suggest direction and participating; supporting and delegating are very similar terms, as are delegating and achievement. Therefore, identifying the difference between

Fiedler's Situational Theory and House's Path Goal theory is difficult. House believed that a leader could change his style and expressed the outcome numerically while Fiedler did not believe that a leader could change his style.

The main strengths of the Path Goal theory lie in the theoretical body of knowledge on how leadership behaviors impact follower's satisfaction and performance. It also attempted to link motivation (expectancy theory) and leadership theory (Northouse, 2016). It is also a highly practical model which helps leaders navigate their followers to reaching their goals.

The main criticism of House's work came from Schriesheim and Von Glingow (1977) who observed that the complexity of the variables presented insurmountable difficulties in testing the model. This view was supported by Wagner and Hollenbeck (1992).

A key part of path-goal theory criticisms is that the theory itself can be hard to interpret because of its complexity. The scope of the theory is very broad, involving the formulation of predictions on which of four leadership styles is appropriate for different tasks. This makes it a daunting prospect to incorporate all factors into the selection of a preferred leadership style. The theory has also only been partly supported by the research that has been conducted to assess its validity (House & Mitchell, 1974; Indvik, 1986; Schriesheim, Castro, Zhou, & DeChurch, 2006). Some research has, for example, failed to endorse the positive relationship between leader defectiveness and follower satisfaction.

Other critics have suggested that path-goal theory does not sufficiently explain the connection between leadership behaviour and the motivation of followers. It does not, for example, explain how a leader might utilise various styles to support followers to feel more confident of success. The possible outcome of the theory has also been the subject of some criticism, pointing to the fact that leaders become responsible for providing a great deal to followers – from coaching

and direction, to helping them define goals. This can lead to followers who are overly dependent on a leader, placing a perhaps too great an emphasis on the responsibility the leader should bear.

Appendix 11 - The Questionnaires Email:

Dear School Leaders,

My name is Ali Bin Harmal Al Dhaheri and I am currently undertaking doctoral research at Durham University, UK. My research title is '*The relationship between the levels of Cultural Intelligence and the ability to adapt leadership style amongst the leaders in the Abu Dhabi Education sector*'.

The special feature of this study is that it examines the relatively new concept of cultural intelligence from a leadership perspective. We all live and work in a culturally diverse environment and so this research may have important implications for you as leaders in the UAE education sector. Cultural Intelligence in this research refers to an individual's capability to function and manage effectively in culturally diverse settings. Leadership refers to the process whereby an individual (leader) influences a group of other individuals to achieve a common goal.

The opportunity to survey educational leaders would greatly deepen my research. I would like to invite you to participate in this survey, which aims to measure the relationship between the levels of Cultural Intelligence and the ability to adapt leadership style amongst the educational leaders in both public & private sectors.

I appreciate that your time is precious but I would be extremely grateful if you would participate in this survey as your experiences as educational leaders are essential for this research. Very little academic research has been conducted this area and so I am expecting my findings to be illuminating.

Please note that, ADEC approvals on this research survey has been obtained on 2nd November 2014. If you have any questions related to the survey or research project, please contact the student supervisor "Robert Dixon" using the following contact options:
robert.dixon@durham.ac.uk

Kindly note that this link will take you to the survey: <http://surveys.adu.ac.ae/s/cultural-intelligence>

Please fill the survey at your earliest and if you have any questions please do not hesitate to contact me through this email address: alialdhaheri@me.com

Thank you very much for your time and support.

Yours sincerely,

Ali Aldhaheri

Appendix 12: Additional Data Analysis for Chapter 4

Comparisons to Database Characteristics

SCHOOL GENDER

	Responded	No response	Total	% Resp	% Total	Difference
Boys	23	66	89	13%	20%	-7%
Girls	28	48	76	16%	17%	-1%
Mixed	49	46	95	28%	21%	6%
Not specified	78	105	183	44%	41%	3%
Total	178	265	443	100%	100%	

LOCATION

	Responded	No response	Total	% Resp	% Total	Difference
Abu Dhabi	93	144	237	52%	53%	-1%
Al Ain	64	98	162	36%	37%	-1%
Al Gharbia	21	23	44	12%	10%	2%
Total	178	265	443	100%	100%	

SCHOOL TYPE

	Responded	No response	Total	% Resp	% Total	Difference
Private	79	107	186	44%	42%	2%
Public	99	158	257	56%	58%	-2%
Total	178	265	443	100%	100%	

GRADE LEVELS

	Responded	No response	Total	% Resp	% Total	Difference
KG	34	25	59	19%	13%	6%
KG to Gr 6	34	51	85	19%	19%	0%
KG to Gr 7/8/9	7	16	23	4%	5%	-1%
KG to Gr12/13	74	99	173	42%	39%	3%
Gr 5/6/7 to 12	11	24	35	6%	8%	-2%
Gr 6 to 9	9	32	41	5%	9%	-4%
Gr 10 to 12	9	18	27	5%	6%	-1%
Total	178	265	443	100%	100%	

Objective 1: Cultural Intelligence scale - Promax rotation – Pattern and Structure Matrices

Component	Pattern Matrix			
	1	2	3	4
CQS1	-0.037	-0.011	0.025	0.936
CQS2	0.018	-0.039	-0.098	0.958
CQS3	0.005	0.021	0.003	0.924
CQS4	-0.014	0.054	0.008	0.909
CQK1	0.04	0.796	-0.154	0.052
CQK2	0.313	0.83	-0.402	-0.036
CQK3	-0.009	0.693	0.077	0.191
CQK4	-0.056	0.852	0.144	-0.119
CQK5	-0.144	0.775	0.294	-0.043
CQK6	-0.113	0.808	0.154	0.029
CQM1	0.143	-0.027	0.642	0.185
CQM2	0.046	-0.028	0.777	0.153
CQM3	0.149	-0.051	0.822	0.057
CQM4	0.034	-0.049	0.947	-0.154
CQM5	-0.045	0.153	0.859	-0.097
CQB1	0.91	-0.01	0.003	-0.02
CQB2	0.804	0.076	0.062	0.05
CQB3	0.703	-0.06	0.243	0.057
CQB4	0.898	-0.002	0.056	-0.032
CQB5	0.935	0.011	-0.036	-0.044

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

a Rotation converged in 6 iterations.

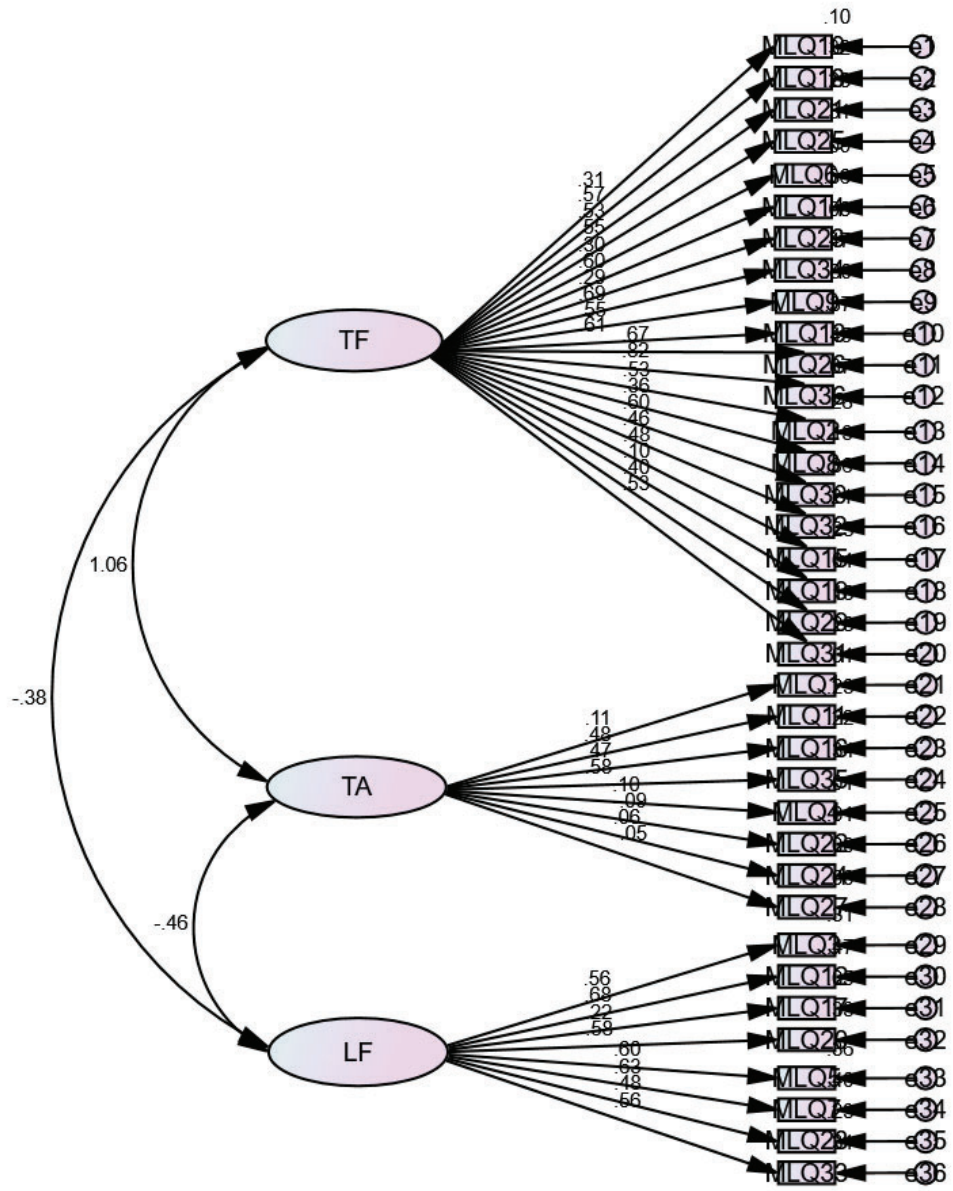
Component	Structure Matrix			
	1	2	3	4
CQS1	0.464	0.374	0.549	0.927
CQS2	0.459	0.318	0.456	0.894
CQS3	0.496	0.403	0.556	0.937
CQS4	0.48	0.427	0.555	0.928
CQK1	0.194	0.763	0.233	0.31
CQK2	0.3	0.726	0.089	0.234
CQK3	0.31	0.801	0.476	0.516
CQK4	0.178	0.85	0.405	0.287
CQK5	0.187	0.844	0.521	0.372
CQK6	0.191	0.855	0.453	0.392
CQM1	0.567	0.357	0.813	0.625
CQM2	0.522	0.374	0.878	0.62
CQM3	0.592	0.358	0.911	0.595
CQM4	0.432	0.295	0.854	0.398
CQM5	0.39	0.464	0.844	0.445
CQB1	0.899	0.219	0.46	0.455
CQB2	0.883	0.332	0.541	0.539
CQB3	0.843	0.248	0.616	0.542
CQB4	0.91	0.241	0.502	0.47
CQB5	0.896	0.221	0.429	0.43

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Objective 2: Further confirmatory factor analysis models

Three factor solution

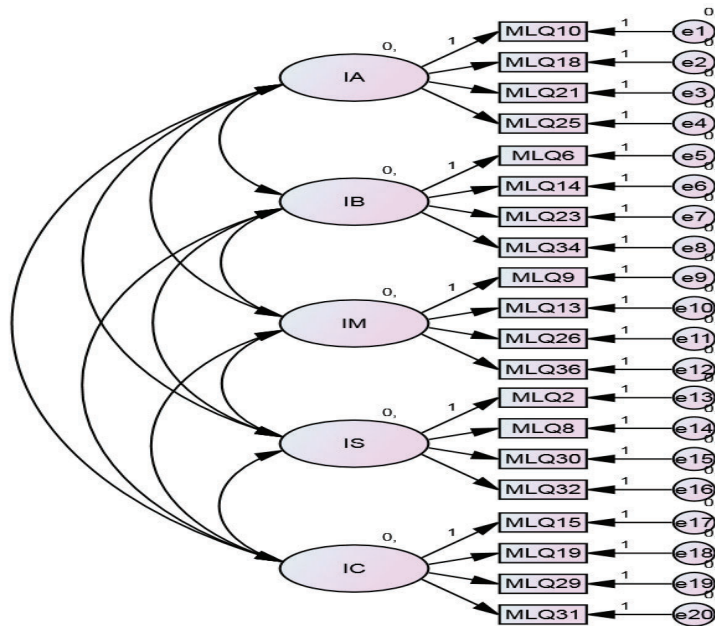


- 1) Chi-squared = χ^2 (*df* 597, N=167) = 1215.637, $p < .000$
- 2) CFI = .638
- 3) TLI = .596
- 4) RMSEA = .079

Standardised regression weights

	<u>Estimate</u>		<u>Estimate</u>
<u>MLQ10</u> <--- TF	<u>0.313</u>	<u>MLQ1</u> <--- TA	<u>0.112</u>
<u>MLQ18</u> <--- TF	<u>0.569</u>	<u>MLQ11</u> <--- TA	<u>0.477</u>
<u>MLQ21</u> <--- TF	<u>0.533</u>	<u>MLQ16</u> <--- TA	<u>0.473</u>
<u>MLQ25</u> <--- TF	<u>0.555</u>	<u>MLQ35</u> <--- TA	<u>0.584</u>
<u>MLQ6</u> <--- TF	<u>0.304</u>	<u>MLQ4</u> <--- TA	<u>0.098</u>
<u>MLQ14</u> <--- TF	<u>0.602</u>	<u>MLQ24</u> <--- TA	<u>0.063</u>
<u>MLQ23</u> <--- TF	<u>0.286</u>	<u>MLQ22</u> <--- TA	<u>-0.094</u>
<u>MLQ34</u> <--- TF	<u>0.689</u>	<u>MLQ27</u> <--- TA	<u>-0.052</u>
<u>MLQ9</u> <--- TF	<u>0.551</u>	<u>MLQ5</u> <--- LF	<u>0.598</u>
<u>MLQ13</u> <--- TF	<u>0.612</u>	<u>MLQ7</u> <--- LF	<u>0.629</u>
<u>MLQ36</u> <--- TF	<u>0.817</u>	<u>MLQ28</u> <--- LF	<u>0.479</u>
<u>MLQ26</u> <--- TF	<u>0.669</u>	<u>MLQ33</u> <--- LF	<u>0.561</u>
<u>MLQ2</u> <--- TF	<u>0.528</u>	<u>MLQ3</u> <--- LF	<u>0.558</u>
<u>MLQ8</u> <--- TF	<u>0.362</u>	<u>MLQ12</u> <--- LF	<u>0.683</u>
<u>MLQ30</u> <--- TF	<u>0.601</u>	<u>MLQ17</u> <--- LF	<u>0.216</u>
<u>MLQ32</u> <--- TF	<u>0.461</u>	<u>MLQ20</u> <--- LF	<u>0.578</u>
<u>MLQ15</u> <--- TF	<u>0.482</u>		
<u>MLQ29</u> <--- TF	<u>0.399</u>		
<u>MLQ19</u> <--- TF	<u>0.098</u>		
<u>MLQ31</u> <--- TF	<u>0.526</u>		

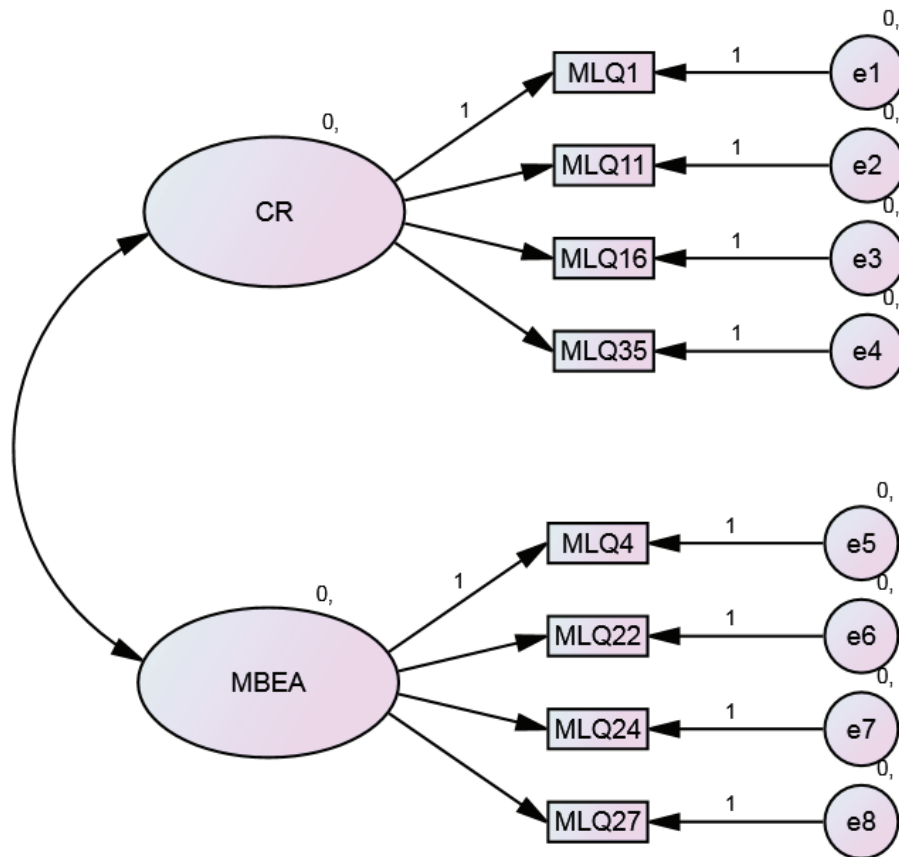
Five factor transformational model



- 1) Chi-squared - χ^2 (df 160, $N=167$) = 300.513, $p > .000$
- 2) CFI = .839
- 3) TLI = .789
- 4) RMSEA = .073

Factor	Item	Estimate
Idealised Attributes	MLQ10	0.201
	MLQ18	0.592
	MLQ21	0.514
	MLQ25	0.613
Idealised Behaviour	MLQ6	0.211
	MLQ14	0.663
	MLQ23	0.278
	MLQ34	0.708
Inspirational Motivation	MLQ9	0.573
	MLQ13	0.592
	MLQ26	0.694
	MLQ36	0.784
Intellectual Stimulation	MLQ2	0.487
	MLQ8	0.355
	MLQ30	0.673
	MLQ32	0.563
Individual Consideration	MLQ15	0.468
	MLQ19	0.041
	MLQ29	0.384
	MLQ31	0.529

Two factor transactional model

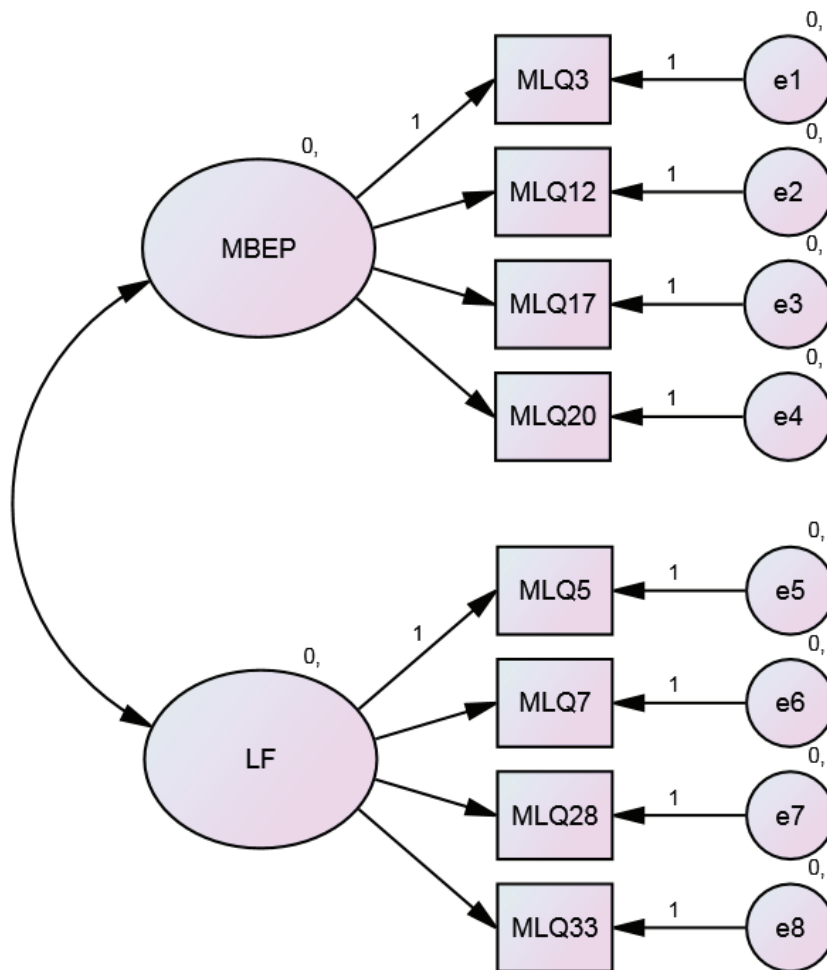


- 1) Chi-squared - χ^2 (df 19, $N=167$) = 19.909, p .400
- 2) CFI = .994
- 3) TLI = .989
- 4) RMSEA = .017

Standardised Regression Weights

Factor	Item	Estimate
Contingent Reward	MLQ1	0.196
	MLQ11	0.475
	MLQ16	0.629
	MLQ35	0.427
Management by Exception (Active)	MLQ4	0.508
	MLQ22	0.884
	MLQ24	0.599
	MLQ27	0.557

Two factor laissez-faire model



- 1) Chi-squared - χ^2 (df 19, $N=167$) = 42.964, p .001
- 2) CFI = .902
- 3) TLI = .815
- 4) RMSEA = .087

Standardised Regression Weights

Factor	Item	Estimate
Management by Exception (Passive)	MLQ3	0.557
	MLQ12	0.659
	MLQ17	0.195
	MLQ20	0.567
Laissez-Faire	MLQ5	0.618
	MLQ7	0.620
	MLQ28	0.458
	MLQ33	0.557

Objective 3: Discriminant Validity – Pattern and Structure Matrices – PCA using Promax Rotation

	Pattern Matrix				
	1	2	3	4	5
LA1	0.733	-0.105	0.11	-0.167	0.168
LA2	0.755	0.123	-0.191	0.244	0.026
LA3	0.828	0.018	-0.125	0.074	-0.055
LA4	0.824	0.155	-0.15	0.127	-0.098
LA5	0.706	-0.023	-0.152	0.06	0.167
LA6	0.574	-0.034	-0.045	0.036	0.397
LA7	0.827	0.146	0.006	0.053	-0.372
LA8	0.817	0.033	-0.065	0.047	0.056
LA9	0.649	-0.004	0.174	-0.061	0.105
LA10	0.741	-0.136	0.225	-0.206	0.17
LA11	0.94	-0.038	0.152	-0.008	-0.235
LA12	0.826	-0.116	0.17	-0.144	0.059
LA13	0.672	-0.056	0	-0.089	0.22
CQS1	0.134	0.032	0.013	0	0.807
CQS2	0.041	-0.005	-0.063	0.075	0.845
CQS3	0.02	0.081	-0.008	0.047	0.876
CQS4	-0.048	0.104	-0.009	0.039	0.894
CQK1	-0.012	0.788	-0.165	-0.109	0.183
CQK2	0.248	0.779	-0.215	0.086	-0.167
CQK3	-0.067	0.712	0.068	0.026	0.212
CQK4	-0.127	0.831	0.117	0.027	-0.01
CQK5	0.024	0.761	0.288	-0.13	-0.049
CQK6	-0.047	0.78	0.17	-0.094	0.088
CQM1	-0.004	-0.013	0.761	0.087	0.078
CQM2	0.116	-0.012	0.817	-0.002	0.053
CQM3	-0.027	-0.013	0.82	0.159	0.061
CQM4	-0.017	0.02	0.895	0.04	-0.16
CQM5	-0.04	0.171	0.801	0.042	-0.057
CQB1	0.013	-0.048	0.037	0.855	0.028
CQB2	0.147	0.062	0.077	0.737	0.032
CQB3	0.058	-0.088	0.256	0.666	0.037
CQB4	-0.101	-0.029	0.022	0.91	0.095
CQB5	-0.045	-0.069	0.032	0.931	-0.008

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

	Structure Matrix				
	1	2	3	4	5
LA1	0.777	0.1	0.358	0.227	0.554
LA2	0.828	0.272	0.249	0.513	0.475
LA3	0.786	0.144	0.184	0.35	0.379
LA4	0.799	0.269	0.205	0.404	0.38
LA5	0.766	0.132	0.215	0.345	0.499
LA6	0.792	0.197	0.388	0.394	0.702
LA7	0.671	0.218	0.175	0.3	0.165
LA8	0.852	0.205	0.295	0.388	0.512
LA9	0.745	0.211	0.439	0.325	0.547
LA10	0.804	0.103	0.448	0.236	0.6
LA11	0.85	0.137	0.345	0.359	0.369
LA12	0.837	0.102	0.397	0.273	0.536
LA13	0.748	0.129	0.306	0.26	0.552
CQS1	0.605	0.308	0.522	0.363	0.901
CQS2	0.529	0.253	0.452	0.371	0.859
CQS3	0.552	0.358	0.536	0.389	0.925
CQS4	0.495	0.37	0.525	0.364	0.908
CQK1	0.149	0.757	0.167	0.054	0.283
CQK2	0.272	0.722	0.1	0.206	0.121
CQK3	0.235	0.793	0.428	0.262	0.436
CQK4	0.093	0.85	0.376	0.206	0.244
CQK5	0.203	0.826	0.486	0.158	0.307
CQK6	0.185	0.837	0.44	0.165	0.357
CQM1	0.35	0.303	0.837	0.446	0.526
CQM2	0.439	0.321	0.883	0.423	0.569
CQM3	0.369	0.33	0.91	0.529	0.555
CQM4	0.237	0.298	0.824	0.373	0.348
CQM5	0.27	0.442	0.834	0.395	0.431
CQB1	0.39	0.165	0.417	0.876	0.352
CQB2	0.515	0.292	0.496	0.858	0.446
CQB3	0.433	0.174	0.56	0.797	0.428
CQB4	0.337	0.188	0.429	0.905	0.373
CQB5	0.339	0.137	0.398	0.909	0.303

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Objective 3: Discriminant Validity – Pattern and Structure Matrices – PAF using Direct Oblimin Rotation

	Pattern Matrix				
	1	2	3	4	5
LA1	0.702	-0.075	0.109	-0.122	-0.164
LA2	0.712	0.119	-0.246	0.144	-0.048
LA3	0.75	0.018	-0.091	0.098	-0.001
LA4	0.738	0.143	-0.139	0.129	0.02
LA5	0.66	-0.014	-0.076	0.093	-0.163
LA6	0.576	-0.012	-0.066	-0.012	-0.352
LA7	0.672	0.115	-0.069	0.025	0.177
LA8	0.764	0.04	-0.073	0.043	-0.096
LA9	0.607	0.021	0.004	-0.16	-0.133
LA10	0.729	-0.105	0.151	-0.233	-0.166
LA11	0.876	-0.028	-0.019	-0.134	0.15
LA12	0.795	-0.095	0.101	-0.177	-0.084
LA13	0.64	-0.037	0.045	-0.042	-0.198
CQS1	0.18	0.063	-0.046	-0.066	-0.728
CQS2	0.121	0.03	-0.105	-0.027	-0.686
CQS3	0.059	0.114	-0.095	-0.034	-0.816
CQS4	0.004	0.137	-0.084	-0.043	-0.809
CQK1	0	0.698	0.088	0.077	-0.128
CQK2	0.194	0.66	-0.062	0.127	0.115
CQK3	-0.045	0.678	-0.049	-0.096	-0.184
CQK4	-0.126	0.809	-0.047	-0.11	-0.003
CQK5	0.015	0.751	0.084	-0.247	0.01
CQK6	-0.04	0.762	0.057	-0.167	-0.086
CQM1	0.05	0.038	-0.125	-0.682	-0.091
CQM2	0.162	0.033	-0.037	-0.767	-0.069
CQM3	0.024	0.027	-0.185	-0.79	-0.071
CQM4	-0.005	0.08	-0.106	-0.701	0.042
CQM5	-0.019	0.213	-0.098	-0.667	-0.021
CQB1	0.035	-0.036	-0.8	-0.054	-0.036
CQB2	0.165	0.07	-0.699	-0.101	-0.039
CQB3	0.092	-0.058	-0.622	-0.245	-0.053
CQB4	-0.076	-0.016	-0.884	-0.03	-0.089
CQB5	-0.027	-0.059	-0.898	-0.038	0.001

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

	Structure Matrix				
	1	2	3	4	5
LA1	0.755	0.11	-0.234	-0.303	-0.504
LA2	0.815	0.27	-0.496	-0.18	-0.42
LA3	0.764	0.148	-0.34	-0.126	-0.344
LA4	0.776	0.266	-0.391	-0.138	-0.348
LA5	0.741	0.137	-0.332	-0.165	-0.454
LA6	0.769	0.197	-0.383	-0.329	-0.647
LA7	0.629	0.204	-0.286	-0.121	-0.178
LA8	0.834	0.207	-0.38	-0.226	-0.471
LA9	0.712	0.212	-0.327	-0.371	-0.496
LA10	0.788	0.109	-0.239	-0.396	-0.548
LA11	0.84	0.142	-0.354	-0.282	-0.324
LA12	0.823	0.105	-0.272	-0.343	-0.489
LA13	0.72	0.133	-0.26	-0.257	-0.499
CQS1	0.571	0.3	-0.352	-0.465	-0.871
CQS2	0.5	0.247	-0.357	-0.406	-0.792
CQS3	0.513	0.35	-0.377	-0.475	-0.913
CQS4	0.457	0.361	-0.351	-0.469	-0.886
CQK1	0.139	0.69	-0.052	-0.146	-0.238
CQK2	0.255	0.644	-0.182	-0.083	-0.098
CQK3	0.211	0.751	-0.25	-0.379	-0.382
CQK4	0.072	0.826	-0.198	-0.33	-0.2
CQK5	0.179	0.806	-0.158	-0.43	-0.263
CQK6	0.163	0.812	-0.162	-0.391	-0.308
CQM1	0.315	0.289	-0.438	-0.793	-0.457
CQM2	0.403	0.307	-0.417	-0.861	-0.5
CQM3	0.326	0.31	-0.521	-0.905	-0.486
CQM4	0.202	0.29	-0.376	-0.745	-0.311
CQM5	0.232	0.425	-0.393	-0.77	-0.383
CQB1	0.361	0.149	-0.837	-0.375	-0.289
CQB2	0.485	0.274	-0.824	-0.446	-0.371
CQB3	0.402	0.161	-0.754	-0.512	-0.362
CQB4	0.305	0.17	-0.888	-0.384	-0.306
CQB5	0.31	0.119	-0.891	-0.358	-0.236

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

Objective 3: Discriminant Validity – Pattern and Structure Matrices – MLM using Direct Oblimin Rotation

	Pattern Matrix				
	1	2	3	4	5
LA1	0.723	-0.133	0.103	-0.07	-0.12
LA2	0.721	0.116	-0.236	0.108	-0.034
LA3	0.754	0.114	-0.1	0.031	-0.001
LA4	0.713	0.143	-0.14	0.146	-0.019
LA5	0.672	0.083	-0.063	-0.006	-0.158
LA6	0.586	-0.053	-0.045	-0.019	-0.336
LA7	0.67	0.036	-0.056	0.122	0.159
LA8	0.75	0.031	-0.068	0.035	-0.11
LA9	0.601	-0.122	-0.023	0.022	-0.135
LA10	0.738	-0.227	0.132	-0.102	-0.136
LA11	0.864	-0.114	-0.028	-0.018	0.138
LA12	0.799	-0.179	0.094	-0.102	-0.071
LA13	0.655	-0.056	0.053	-0.056	-0.178
CQS1	0.196	-0.064	-0.038	0.052	-0.719
CQS2	0.138	-0.026	-0.098	0.025	-0.678
CQS3	0.071	-0.018	-0.096	0.114	-0.821
CQS4	0.012	-0.05	-0.072	0.124	-0.82
CQK1	0.011	0.063	0.09	0.671	-0.121
CQK2	0.209	0.081	-0.052	0.627	0.151
CQK3	-0.039	-0.103	-0.036	0.66	-0.19
CQK4	-0.131	-0.093	-0.045	0.828	-0.01
CQK5	0.002	-0.196	0.068	0.785	-0.006
CQK6	-0.05	-0.139	0.043	0.764	-0.103
CQM1	0.06	-0.726	-0.105	0.036	-0.039
CQM2	0.167	-0.849	-0.002	0.02	-0.016
CQM3	0.019	-0.842	-0.158	0.021	-0.043
CQM4	-0.036	-0.615	-0.125	0.117	-0.005
CQM5	-0.048	-0.598	-0.104	0.234	-0.068
CQB1	0.029	-0.047	-0.813	-0.036	-0.038
CQB2	0.182	-0.143	-0.66	0.051	-0.019
CQB3	0.1	-0.228	-0.621	-0.054	-0.042
CQB4	-0.077	0.001	-0.909	-0.01	-0.093
CQB5	-0.023	-0.035	-0.906	-0.059	0.007

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

	Structure Matrix				
	1	2	3	4	5
LA1	0.762	-0.316	-0.241	0.115	-0.473
LA2	0.815	-0.217	-0.49	0.265	-0.41
LA3	0.768	-0.134	-0.343	0.159	-0.336
LA4	0.765	-0.153	-0.383	0.271	-0.362
LA5	0.747	-0.191	-0.325	0.148	-0.45
LA6	0.77	-0.375	-0.376	0.199	-0.642
LA7	0.63	-0.126	-0.272	0.209	-0.183
LA8	0.825	-0.254	-0.374	0.208	-0.473
LA9	0.709	-0.359	-0.34	0.21	-0.484
LA10	0.793	-0.401	-0.255	0.113	-0.524
LA11	0.837	-0.284	-0.356	0.151	-0.322
LA12	0.825	-0.354	-0.277	0.101	-0.475
LA13	0.722	-0.272	-0.253	0.117	-0.48
CQS1	0.572	-0.477	-0.349	0.293	-0.864
CQS2	0.503	-0.422	-0.355	0.245	-0.788
CQS3	0.517	-0.487	-0.382	0.353	-0.917
CQS4	0.458	-0.496	-0.35	0.357	-0.899
CQK1	0.144	-0.158	-0.054	0.666	-0.237
CQK2	0.256	-0.113	-0.179	0.616	-0.079
CQK3	0.215	-0.391	-0.246	0.737	-0.392
CQK4	0.072	-0.327	-0.198	0.842	-0.208
CQK5	0.18	-0.405	-0.167	0.832	-0.271
CQK6	0.163	-0.383	-0.173	0.813	-0.319
CQM1	0.315	-0.813	-0.438	0.293	-0.44
CQM2	0.403	-0.907	-0.416	0.308	-0.49
CQM3	0.323	-0.936	-0.52	0.316	-0.489
CQM4	0.198	-0.693	-0.384	0.318	-0.336
CQM5	0.225	-0.728	-0.393	0.44	-0.408
CQB1	0.357	-0.39	-0.847	0.152	-0.292
CQB2	0.485	-0.481	-0.801	0.262	-0.367
CQB3	0.402	-0.508	-0.751	0.165	-0.354
CQB4	0.305	-0.385	-0.903	0.176	-0.308
CQB5	0.311	-0.374	-0.898	0.123	-0.237

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

Objective 4 - Testing for Moderated Effects of School Type

The Pearson correlation analyses have been re-run, separately for respondents from private schools and those from public schools, to test for the moderated effect of a ‘third’ variable (school type) on the relationship between an independent and dependant variable.

The analyses shown against objective 4 in Chapter 4 presents the results from Fisher’s r-to-z transformation, and the statistical significance of the resulting z-scores. In order to present this analysis, first the correlations for each relationship must first have been calculated. The tables below show the results of Pearson correlations. Highlighted in yellow are the correlations that are significant for one of the two relationships, but not the other. For example, for CQ Motivation, the correlation is significant for public schools ($p < .05$) but not private ($p > .05$). As with the analysis presented in the thesis, the Bonferroni correction has been applied.

Correlation coefficients for relationships by demographic characteristic (Research Question 4a: Cultural Intelligence and Leadership Style)

Pearson Correlation	Total CQ		CQ Strategy		CQ Knowledge		CQ Motivation		CQ Behaviour	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Transformational	0.284	0.27	0.209	0.228	0.136	0.021	0.297	0.148	0.234	0.201
Sig. (2-tailed)	0.006	0.022	0.046	0.054	0.198	0.863	0.004	0.215	0.024	0.09
N	92	72	92	72	92	72	92	72	92	72
Transactional	0.248	-0.09	0.208	-0.054	0.139	-0.116	0.14	-0.267	0.169	-0.103
Sig. (2-tailed)	0.017	0.451	0.047	0.653	0.185	0.331	0.183	0.023	0.107	0.389
N	92	72	92	72	92	72	92	72	92	72
Laissez-faire	0.052	-0.152	0.076	-0.085	0.159	0.111	-0.138	-0.06	-0.004	-0.207
Sig. (2-tailed)	0.622	0.207	0.47	0.481	0.129	0.359	0.189	0.62	0.973	0.083
N	92	71	92	71	92	71	92	71	92	71

Correlation coefficients for relationships by demographic characteristic (Research Question 4b: Cultural Intelligence and Leadership Adaptability)

Pearson Correlation	Total CQ		CQ Strategy		CQ Knowledge		CQ Motivation		CQ Behaviour	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
LA	0.678	0.413	0.597	0.571	0.363	0.175	0.579	0.279	0.694	0.324
Sig. (2-tailed)	0	0	0	0	0	0.138	0	0.017	0	0.005
N	92	73	92	73	92	73	92	73	92	73

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