

Education Reform for the Knowledge Economy in the Middle East

A study of education policy making and enactment in The Kingdom of Bahrain

by

Michael D Lightfoot



TITLE PAGE

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for the award of the Degree of Doctor of Philosophy

at

The Institute of Education, London.

July 2014

ABSTRACT

The knowledge economy is a construct of a neo-liberal imaginary that is linked closely to the promotion of educational technology use in schools. In the belief that educational technology can assist in the rapid development and modernisation of the education systems in the Middle East, over the last 20 years, donor agencies, international conglomerates and supra-national organisations have encouraged governments in the region to embed information and communication technology into the policies for the reform and development of their education systems.

Taking Michael Peters' assertion that there are three elements to the knowledge economy – learning, creativity and openness, the study points to the paradox of promoting these concepts within the context of the deeply conservative authoritarian regimes in the Arabian Gulf. By way of an ethnographic case study into the formulation and subsequent enactment of education policy reforms in the small kingdom of Bahrain in the Arabian Gulf, this account analyses the historical context together with political and social conditions giving rise to the education reforms in this region and the conflicting pressures experienced by those in schools that are tasked with enacting the reforms. Comparisons are made with the situation in Jordan from whence much of the regional impetus for technology-led education reforms arose.

The analysis of the findings uses the lens of New Institutional Economics as a way of focusing upon the conflicting cultural, social and political factors that influence the policy enactment. In this way a more satisfactory narrative is achieved than one simply centred upon a neo-liberal analysis or upon conventional models of technology adoption. Ultimately, the study concludes that it is only through a rebalancing of the conflicting forces of structure and agency that successful social reform and policy enactment can take place in this part of the world where autonomy and self-actualisation are novel concepts for the great majority of the population.

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Acknowledgements

I am grateful to the following people who have helped me so much during the long journey which this thesis has represented, over six years, across two continents and in five countries.....

In the UK, at the London Knowledge Lab of the Institute of Education: Neil Selwyn, my first supervisor, who helped to launch me on this odyssey, but who has now, himself, departed for foreign shores; and to John Potter, Jane Perryman, Martin Oliver and Gwyneth Hughes, all of whom have helped to pilot this study safely into port. To Graham Browne, the former principal, and the staff and students at Estover Community College, Plymouth – now know as the Gate Academy;

In Jordan, at the Jordan Education Initiative: Haif Bannayan, Osama Obeidat, Wes Snyder;

In Dubai, at the Knowledge and Human Development Authority: Peter Carpenter, Jameela Al Muhairi, Suzanne Selim;

In Bahrain, at the Quality Assurance Authority for Education and Training and the Bahrain Teachers College: Kevin Corrigan, Chris Green, Ian Haslam, Hanada Taha-Thomure, Dan Kirk, Suhaib Abdullah.

The total word count (excluding bibliography and appendices) is: 70,293

A note about the cover picture..... This is a photograph which features prominently in the launch document for the King Hamad School of the Future project. On the face of it, the picture represents a powerful fusing of the traditional with the modern; the picture frames three girl students wearing traditional hijabs, to cover their hair, with one of them looking intently down a microscope, whilst the other two look on. Take a second look at the photograph and it will be apparent that the girl is looking through the microscope from behind, and she would, in fact, see nothing through the objective lens. The picture represents a perfect epitome of the education technology project that is the subject of this study. The presentation here is slick and glossy, there is an apparent reconciliation of traditional values with the Modernist project yet beyond the superficial representation, there is nothing of substance here. The shot is clearly posed, but the director of photography has not even troubled to make the artifice appear real. It is merely a symbolic representation of how lay people may imagine technology impacts upon learning and what scientists do, in this case, earnestly looking down a microscope to reveal nature's truths. It is rather as the impresario Diaghilev said to Ravel on his first hearing of the music for La Valse "it is not a dance, it is a picture of a dance" .

Summary

This thesis is based upon the case study of an education technology project in the small island state of Bahrain, situated in the Arabian Gulf. It takes this case as being somewhat representative of the manifestations and the limitations of the 'neoliberal imaginary' in policy enactment and in describing and analysing education reforms in this country and similar states in the Middle East. The account seeks to address the paradoxes and conflicts inherent in the neoliberal policy formations in an Arab world where the trajectory towards modernism has been rapid and recent; and where neo-colonial interventions continue to colour the landscape. Neoliberalism is, as Shamir (2008:3) puts it,:

'..... a complex, often incoherent, unstable and even contradictory set of practices that are organized around a certain imagination of the 'market' as a basis for the 'universalisation of market-based social relations', with the corresponding penetration, in almost every single aspect of our lives, of the discourse and/or practice of commodification, capital-accumulation and profit-making'

Within this context, and in the light of the increasing globalisation of education policy (Rizvi and Lingard 2010), this account looks at the ways in which education policy makers in the Middle East have sought to meet the perceived needs of the knowledge economy (KE). The study takes the Kingdom of Bahrain, as a case study, within the wider context of the Middle East and North Africa (MENA) region. The study seeks to evaluate the role played by educational technology in policy making as part of the reform process and the subsequent policy enactment (Ball et al, 2012). A particular indicator for the success of the policy reforms is their impact upon the development of the particular students' skills most strongly identified with the KE (Bell 1973, Lorenz and Lundvall 2006, Peters 2010). Whilst focussing on the Gulf state of Bahrain, examples are taken and more general inferences drawn from other Arab states which are at a similar stage in education reform and development, such as Jordan, in the north (where several of the current policy initiatives originally arose), and the Arabian Gulf emirate of Dubai, which is a relatively near neighbour of Bahrain. These states have in common a stated policy intent of seeking to promote a local and regional knowledge economy (KE) and to increase the contribution which the outputs from this KE can make towards their GDP and national wealth. The study uses a qualitative research design and an ethnographic approach in order to provide a contextualized

commentary and an analysis of the key drivers behind the education reform programmes and the enactment of policy suites which have been characterised as “Big Policies, Small World”(Ball 1998). The ethnographic approach is aimed at gaining an insight into the factors which have influenced the policy makers and the conflicts experienced by those tasked with enacting it.

Through conducting interviews with elite policy makers and stakeholders, complemented by institutional-based research, the study seeks to address the ways in which educational technology policy¹ in government schools plays a part in the enactment of education reforms and how government policy aspirations are played out in practice. In particular, the following research questions are addressed:-

- 1) What is the nature of the reforms and what do policy-makers wish to achieve through the promotion of educational technology in school curricula? For example, what do policy-makers and other stakeholders perceive the link to be between educational technology and the development of the knowledge economy?
- 2) What are the drivers for these reforms at an international, national and local level, and which are the principal organisations e.g. OECD, UNESCO, World Bank?
- 3) Within the context of these traditional Muslim societies are there any inherent contradictions and conflicts between the beliefs and traditions of the population and the development of “Twenty-First Century curricula” which are orientated towards visions of globalisation and the knowledge economy?

The research questions are addressed through a qualitative study of policymakers and educational practitioners in the Kingdom of Bahrain. Two distinct, but iterative, phases of research and data collection are employed i.e.

1

Throughout this account I have preferred to use the term ‘educational technology’ as opposed to the more common acronym ‘ICT’, for information and communication technology; however, for contextual reasons, ‘ICT’ appears in the text from time to time. This small, but significant, stylistic point is made in an attempt to employ an objective and neutral vocabulary which is, as far as possible, free from neoliberal neologisms. The interpolation of the letter ‘C’ (for ‘communication’) between the industry standard ‘IT’ for information technology, is a product of a particular neoliberal imaginary. The origin of the acronym can be traced to the policy formations of the UK New Labour government in the 1990s (see page 37)

- i. Policy Making: analysis of the background to the policy documents, seeking the origin of policies and the motives of policy makers and other stakeholders;
- ii. Policy Enactment and Impact: witnessing the implementation of these policies in the field and investigating the issues related to implementation; and analysing the impact of policies at a school level, through individual and focus group interviews and with senior school leaders and teachers.

In addressing these questions, the study is located within a number of contemporary theoretical frameworks i.e. neoliberalism, in the context of the globalisation of public policy-making as articulated by Lingard (2010); the debates about the nature of the knowledge economy in the context of Peters' analysis (2010); and the contemporary thinking about education policy making, informed by the work of Stephen Ball (1998) and Roger Dale (2000) relating to the marketisation of education and a transformationalist narrative. The foundation underpinning the empirical part of the research uses an approach based upon grounded theory, couple with an interlocking theoretical framework as follows: critical theory as an all-embracing framework for analysis within which the problems of structure and agency in policy enactment are explored using the lenses of structuration (Giddens 1991), and new institutional economics (Ciborra and Navarra 2005).

The study provides an analysis of education policy formation and enactment in the education system in Bahrain with references made to technology-related education reforms in other countries within the Middle East and North Africa (MENA) region. It seeks to explore the mismatch that, as Lingard (ibid.) and others (Hartley 2003) have observed, the types of pedagogy required to achieve the creativity and original thinking associated with the knowledge economy may not necessarily be produced by the ways in which educational technology policies are operating at a school level. It has been argued that much deeper institutional reform and more rigorous analysis of current practice, rather than speculating about technology-enriched educational futures, is necessary for this to happen (Selwyn 2010).

LIST OF ACRONYMS

ABEGS	Arab Bureau for Education in the Gulf States
BCE	Before the Common Era
CE	Common Era
CSR	Corporate Social Responsibility
DSIB	Dubai Schools Inspection Bureau
ERfKE	Education Reform for the Knowledge Economy
ESRC	Education and Social Research Council
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GT	Grounded Theory
GSAED	Globally Structured Agenda for Education
ICT	Information and Communication Technology
IMF	International Monetary Fund
IT	Information Technology
ICT4D	Information and Communication Technology for Development
JEI	Jordan Education Initiative
K4D	Knowledge for Development
KBE	Knowledge Based Education
KE	Knowledge Economy
KHDA	Knowledge and Human Development Authority
KHSF	King Hamad School of the Future
LDC	Late Developing Country
MENA	Middle East and North Africa
MoE	Ministry of Education
MoE_p	A minister of education in Bahrain on the progressive wing of government
MoE_t	A minister of education in Bahrain on the conservative wing of government
NGO	Non-Governmental Organisation
NIE	National Institute of Education

NOF	New Opportunities Fund
OECD	Organisation of Economic Cooperation and Development
PIRLS	Programme of International Reading and Literacy Study
PISA	Programme of International Student Assessment
QAAET	Quality Assurance Authority for Education and Training
SES	Socio-Economic Status
SII	School Improvement Initiative
SNO	Supra-National Organisations
STEM	Science Technology Engineering and Mathematics
STS	Science Technology Studies
TIMSS	Trends in International Mathematics and Science Study
UAE	United Arab Emirates
UNESCO	United Nations Education Scientific Educational and Cultural Organisation
USAID	United States Agency for International Development
WB	World Bank
WDR	World Development Report
WEF	World Economic Forum

Preface

This study has emerged from my work over the past 35 years as a teacher, a school and college leader, an inspector and an international education consultant – most recently working on curriculum reform projects involving educational technology in the UK, Central Asia and the Middle East.

In the first few years of the new millennium, from 2000, I was involved with the UK Government's £250 million scheme to improve teachers' classroom skills with educational technology - the so-called 'NOF scheme', named after the National Lottery-sponsored New Opportunities Fund, which underwrote the programme. Subsequently I worked on international donor-funded education technology and curriculum reform projects in Uzbekistan, Armenia and Ukraine. From 2004, alongside these international assignments, my services were retained on several education projects developing 'education visions' for a variety of consortia preparing bids for the UK government's ambitious Building Schools for the Future Programme. Fieldwork which I conducted with colleagues, at that time, in several inner-city areas of urban deprivation confirmed a situation where the use of educational technology to stimulate student-centred learning was almost completely absent. A gulf clearly existed between the visions being devised by education consultants, under the guidance of central government policy, and the reality of life in everyday classroom activities; between the aspirational policies and the existing pedagogical practices. Despite the previous repeated waves of putative constructivist reforms coming from Whitehall, and hundreds of millions of pounds spent on educational technology in schools since 1979, the learning in many classrooms, particularly those in the most deprived and needy areas, was little changed from the traditional "teacher as transmitter" model of pedagogy.

At that time, in some parts of the literature relating to educational technology, there were suggestions that countries in the developing world could, with the aid of educational technology, "leapfrog" (Ewers and Malecki 2009) the early stages of education development and reform in order to achieve state schooling more suited to the agendas of the Twenty-First Century. The Jordan Education Initiative (JEI) was held as a positive example of technology-enriched education reform in the Middle East (Chisholm and Steiner-Khamsi 2009), within the context of a World Bank funded 10 year project in that country entitled "Education Reform for the Knowledge Economy" (ERfKE).

A commission from the United States Agency for International Development (USAID) in early 2008 gave me the opportunity to work with the JEI to advise them on the development of an educational strategy for the next phase of their development as a non-governmental organisation (NGO). Would these educational-technology-related reforms in this part of the world have a greater chance of success, than their UK counterparts? And could the ERfKE project ambitions and the ideology be replicated in other Arab states? These are the key questions that this thesis set out to explore in the context of the Arabian Gulf state of Bahrain.

Introduction – background and rationale to the study

The purpose of this study is to provide an analysis of recent education reform policies related to the so called knowledge economy (KE) in the Middle East, and the role of educational technology in the reform process. The study takes the Gulf Arab state of Bahrain as a case study through which to view and comment upon many of the features common to these reforms elsewhere in the Middle East and North Africa (MENA) region. Several commentators have pointed out that these policy reforms have tended to share common ambitions, from the perspective of the respective governments and of the other key actors, notably, the global information technology conglomerates and the supra-national inter-governmental organisations (SNO), such as UNESCO, the World Bank and the OECD. These common features include:- the promotion of ICT skills and competencies across school curricula; the development of e-Learning in and out of the classroom; aspirations for the learners to develop the skills necessary for them to be successful participants in the knowledge economy, both as future employees and citizens (Dale 2000, Robertson 2005, Zhao, Lei et al. 2006, Rizvi and Lingard 2010).

The successful implementation of educational technology in schools has, therefore, come to be seen by both the SNO and the national governments as a key element in modernisation and reform of education in their countries. Indeed, even within the limited education budgets of countries with late developing economies (LDCs) there has been a significant investment in computers and educational technology infrastructure in schools, in the belief that the machines will serve to transform what and how teachers teach and learners learn and therefore transform the economic, cultural and societal bases of nations as they progress into the Twenty-First Century (El-Tawila, Lloyd et al. 2000, Jensen and Lauritsen 2005, Kozma 2005). Educational

technology, has pride of place within the Twenty-First Century Skill agenda (Facer 2011), which is driving much of the educational discourse about the KE, is therefore a global policy concern of contemporary times (Ball 1998, Gabbard 2008, OECD 2010)

Rather than accept the underlying assumptions about technology-led reform of educational and economic fortunes, a significant body of writers and commentators (Cuban 2001, Warschauer 2003, Apple 2004, Monahan 2005, Selwyn 2010) have questioned the relationship between government policy making, investments in educational technology and the learning outcomes in schools and classrooms. These critics have identified a number of areas of tension that are becoming evident from a critical global policy perspective, not least:-

Issues related to pedagogy - In many respects the “teacher as transmitter” (Richmond 1993, Owston 1997, Halstead 2004) model of pedagogy is at odds with the promotion of the higher order thinking skills implicit in the establishment of a knowledge economy; yet educational technology has done little to shift the model of teaching away from a predominantly didactic style in most learning establishments – indeed the advent of interactive whiteboards has, according to some commentators, served to reinforce this transmissive teaching model (Glover, Miller et al. 2005);

Issues concerning the curriculum - i.e. the current absence of a meaningful school curricula which define the relationship between competence in office productivity software (McDonald 2004) and the development of higher order thinking skills – e.g. discernment and discrimination, analysis, synthesis, justification;

Issues related to globalisation versus indigenous cultures – i.e. the mismatch and conflict between the aims and objectives of the multi-national technology corporations, the globalised consumer economy and the more local aims and needs of national education systems. Roger Dale (2000) has described this as an example of the “Globally Structured Agenda for Education”.

This study will examine the issues through a detailed investigation of a technology related education reform project in one country in the Middle East, whilst noting the common features across the MENA region and the manifestations of a comparable policy in one country in particular, Jordan; with some reference to the nearby Gulf

emirate of Dubai. It will look at the ambitions underlying the education reform policies in respect of educational technology; the factors that influence the success of the policy implementation; the impact on teaching and learning in schools; the quality of the learner experience; and the influence upon educational outcomes. The study will therefore explore the disparity that exists between the rhetoric of the much-heralded information revolution in schools and the reality of day to day custom and practice in most classrooms, and it will endeavour to identify some underlying reasons and common features in the Middle East region.

The investigation will focus upon Bahrain with references made to Jordan, in particular, since their educational technology reform policies and programmes share many common features. These two countries are significant, not least because of their shared belief that investment in educational technology in schools will stimulate the development of a highly skilled and information-literate workforce to promote the KE. Of more importance, in the references to Jordan, is the finding that the KHSF project borrowed heavily upon the rhetoric surrounding the Jordan ERfKE project, which was launched at the World Economic Forum (WEF) in 2003 and has been underwritten by USAID. Bahrain and Jordan share ostensibly similar education technology and policy ambitions, but each is at a different stage of economic and pedagogic development, and each has different imperatives. Jordan has a relatively (in MENA terms) high-performing education system (OECD 2010) yet is a relatively low-income nation with few natural resources from which to contribute towards its gross domestic product; Bahrain, by contrast, is a small, wealthy rentier state, with poorly performing schools (Barber and Mourshed 2010). As a country, it was one of the first to exploit its oil reserves in 1932 and, regionally, it has the most urgency to develop a post-oil economy as the reserves have been beginning to dwindle, since the onset of the new millennium.

A common ambition for both states, therefore, is to develop their education systems to produce high-calibre potential “knowledge workers” and to diversify their economies so that their GDPs become less dependent upon revenues from natural resources (most notably oil) and more upon the social and intellectual capital of its people. The ten-year two-phase Education Reform for the Knowledge Economy (ERfKE) project in Jordan is an example of a comprehensive and ambitious project to address many of the existing shortcomings of the education system in that country, partly through an investment in educational technology in schools, but also through a corresponding overhaul of the curriculum. Similarly, the King Hamad Schools of the Future (KHSF) project which was launched in 11 pilot schools in the

Kingdom of Bahrain in 2005, with a plan for a national rollout by 2010 had an ambition, at its launch, to promote the development of the “knowledge workers” of tomorrow.

Despite the transformative ambitions of these programmes, it could be argued that relatively little change has occurred in the everyday activities in schools in either of these two states. In practice, as published school inspection and review reports and evaluations make clear, classroom practice for most teachers in most schools have remained unchanged for most of the time (QAAET 2010). In the majority of cases, the educational technology implementations have seldom moved far beyond teachers using data projectors and interactive whiteboards (IWB) - what David Buckingham (Buckingham 2010:6) terms “the wasteland of spread sheet, file management and instrumental training that constitutes most ‘information technology’ courses in schools”. In this light, it could be argued that in Bahrain, but also in Jordan, the country upon which the KHSF is modelled, students are experiencing a phenomenon common to many education systems where the rhetoric of educational technology policies are simply failing to be realised on the ground.

However, viewing this apparent “failure” of educational technology overlooks many of the complex political, economic, social and cultural issues at play at the different levels of analysis – from macro-level issues of supranational educational governance to micro-level issues of religion and local cultures. It is evident that the educational technology policies are part of a much a wider education reform agenda relating to Twenty-First Century Skills and the KE. This study, therefore, seeks to look beyond a straightforward assertion that educational technologies are “not working” as they should.

Through an analysis of the policy documents, followed by interviews and focus groups with the principal actors in this analytical narrative. The study therefore aims to clarify the complex factors underpinning the formulation of government technology in education policies and the ways in which the policies are being enacted.

The literature review²

Rather than having the literature review as separate discrete chapter, I have chosen to embed the findings from the literature searches within the relevant sections of the thesis. The breadth and scope of the literature review has expanded as the complexity of the issues under investigation has emerged. As my research proceeded, several strands developed which I have tried to relate to each other in order to arrive at satisfactory and credible conclusions. New Institutional Economics emerged, unexpectedly, as a helpful, and sufficiently broad, theoretical framework that as helped to provide, I hope, a convincing narrative to the research findings.

The literature review began under the guidance of Neil Selwyn, my original supervisor; I first explored the literature of the techno-sceptics:- Neil himself is a leading international figure in this respect, and others include, for example, Larry Cuban, Torin Monihan, and, in his early writings, Michael Apple. Michael Peters' work that defined the three aspects of the Knowledge Economy - Learning, Creativity and Openness, provided a constant reminder of the deeper wished-for meta-transformations that underpin government policies in respect of technology implementation in schools. Nonetheless, against the chorus of sceptics there remains in much of the literature an enthusiasm for the potentially transformative power of technology. Amongst the techno-advocates, Stephen Heppell was a source of inspiration during the early formulation of my research ideas, and I was intrigued with the narratives produced by Suga Mitra (2003) and his hole in the wall experiments in India; Mark Prensky too, provides a powerful advocacy of the power of information technology to transform learning and Robert Kozma makes a strong case for IT investment in schools. In the academic mainstream, the work of Sir John Daniel on 'mega-schools' (2010) provides a compelling case for learning through and with the aid of technology; Dianne Laurillard's (2013) penetrating analysis always provides a balanced and wise perspective on learning technologies and learning design; the work of Martin Oliver (Oliver, Roberts et al. 2007, Oliver 2011) gives a strongly and reasoned advocacy for appropriate manifestations of information technology in learning and Grainne Conole and Juliette Culver (Conole and Culver 2009) have shown how harnessing social networking can advance learning.

² I have only provided citations in this section for those scholars where direct references to their work do not appear in the main body of the thesis

The thesis, however, has adopted a critical stance to education technology, and therefore the significant work of these scholars has not been included in the main body of the thesis, since their arguments would, I decided, be a distraction to the main critical arguments.

There are, nonetheless, several examples of the high-level literature on globalisation, technology and the transformation of knowledge economies that have been constant guiding lights – in this respect Castells and Appadurai have been twin beacons, as social commentators and theorists; from a philosophical perspective Weber, Habermas, Heidegger (1996) and Foucault have been constant guides in terms of comparative religion, emergent democratic thinking and for arguments relating to technological determinism and, for example, the surveillance society.

To cast the study in the context of an Arab world emerging into a globalised knowledge economy in the Twenty-First Century it has been necessary to explore several foundational works both from the Western scholarly tradition, for example the writings of Eugene Rogan, Fellow of the Modern History of the Middle East at Oxford University, as well as the oft reprinted works by the respected Lebanese historian Alfred Hourani (2005) on the history of the Arab peoples. As a constant critic and social commentator of the Orientalist mindset Edward Said was an early and, later came to be, a regular influence on the analysis, as has Said's *bête noir* Bernard Lewis (2004). The Iraqi, Ali Alawi, provided me with an early and poignant narrative on the crisis confronting Islam in the Middle East, in these recent decades after the invasion of Iraq by the Anglo-American alliance. This general research, which related to the development of the Arab World since the Seventh Century CE, was supplemented significantly by the recent work of Christopher Davidson, a contemporary writer on the ruling elites in the Arabian Gulf states from the University of Durham and through a powerful and uncompromising ethnography by Stephen Hertog that provides an account of his time working with the ruling bureaucracy in Saudi Arabia.

Alongside the early literature searches related to technology and educational transformation, I was encouraged to explore the fields of public policy making in respect of education reform in a globalized world through the work of, for example, Roger Dale, Susan Robertson from Bristol, Stephen Ball at the Institute of Education and David Held of the London School of Economics (LSE) alongside the influential Fazal Ritzvi and Bob Lingard from Australia. Colleagues from the LSE

began to emerge as influential catalysts in my thinking through Christanthi Avgerou and her work on IT implementations in the context of developing world (2010) but more especially Claudio Ciborra, whose work *The Labyrinths of Information: Challenging the Wisdom of Systems* (2002) coupled with his paper on eGovernment in Jordan (2005) provided a turning point for me with the introduction of New Institutional Economics (NIE) as means of more fully explaining social change in a post-modern world rather than through a simple neoliberal narrative. NIE has been of central importance in my endeavour to provide a comprehensive narrative and analysis of the factors influencing technological change and social development in Late Developing Countries (LDCs). Claudio Ciborra also led me into the realms of Bruno Latour and his various philosophies centred upon the notion that 'we have never been modern' and the concept of text as a material-semiotic actor which has the apparent agency to operate and fulfill policy objectives.

In order to tie the various strands of narrative within a coherent theoretical structure I devised the idea of concentric circles to represent the interplay between the different theories. Central to the theoretical frameworks is Grounded Theory, this provides a pivot around which the complementary theories have revolved and interplayed with each other. As well as NIE at a macro level of analysis, I have found the work of Giddens on structure and agency particularly relevant in the social setting where the research has been conducted. The Middle East context is quite different from the environment in which Giddens devised his theories on structuration, but the issue of actors' agency in authoritarian theocratic and atavistic regimes has been particularly pertinent for this research; this is particular so given the religious determinism that overlays all rational and scientific endeavours in this part of the world.

In summary then, the literature reviews of several contrasting corpuses, have helped to drive towards formulating an over arching hypothesis with which the thesis endeavours to draw to some conclusions and pointers towards future research.

CHAPTER 1 - THE CONTEXT OF THE STUDY – historical, cultural, educational



Figure 1) A GEO-POLITICAL MAP OF THE ARABIAN PENINSULA

1.1 Introduction

In order to appreciate the complexities of the countries where the education reforms are situated, any narrative must include a consideration of the social setting for this essentially ethnographic research project. This chapter, therefore, provides an overview of the circumstances, the characteristics and the culture of Bahrain and the MENA region, and the place of ‘knowledge’ within the Islamic tradition. A fully comprehensive overview of the Middle East, a challenging and much-contested part of

the world, is beyond the scope of this thesis, but this opening chapter aims to indicate the shared traditions of the countries and the region which make up this study. The aim of this opening narrative is to lay the foundations for the interpretation of the later research and analysis.

When considering the region it is important to contextualise the observed traits of the institutions and of the people i.e. government offices, bureaucracies, schools, commercial companies and the people inhabiting these organisations. For example, this introduction will illustrate the importance of the Islamic faith and the way in which this faith is inextricably bound within the state constitutions, the people's consciousness of statehood and of individuals' capacity to operate with responsibility and self-determination. The consideration of these issues is fundamental to validating any educational research in this region, particularly when addressing interpretations of the application of educational technology and the KE. Moreover, when interpreting the observed characteristics in the current education systems, an appreciation of the divergent epistemological roots of Middle Eastern and European countries which began to emerge from the beginning of the Thirteenth Century, is of central significance. In this way the chapter provides a strong local context for the research rather than the often decontextualised narratives seen in much of the literature about the use of educational technology for learning and teaching (Selwyn 2010).

Essentialism and the Middle East

For more than 200 hundred years, much of the writing about the Middle East by Western scholars has been determined by preconceptions of "the other" i.e. a consciously-constructed image of exoticism, yet viewed from Western constructs of civilisation, social organisation and belief systems. In his influential book, *Orientalism*, Edward Said (1978) highlights the patronising and colonial view which many Western European scholars developed towards the civilisations of the East over the past two centuries. Said observed that the Orient is, essentially, a European invention which had since antiquity been 'a place of romance, exotic beings, haunting, memories and landscapes, remarkable experiences'. In Max Weber's study of world religions, he took a religious-Essentialist view of the Orient using Calvinism as his frame of reference, since he saw Islam as largely sharing the same values and core beliefs (Salvatore 1996). He saw both religious belief-systems to be equally austere and deterministic, but with the difference being the possibility of the believer's salvation in Calvinism (based on their "good" earthly works) contrasted with an Islamic belief centred upon predestination. Weber's view of Islam according to Shluchter (1999) was that the Islamic religious ethic was directed towards world domination by means of world

conquest, and inner-worldly affirmation. Through these arguments, it is held that Islam is seen to contradict and be incompatible with the scientifically founded world (Ambza and Stauth.G 1990). However, Salvatore (1996) provides a more nuanced account which goes beyond the Weberian essentialism, to formulate arguments which provide scope for some reconciliation of science and religiosity.

The region has been so dominated by colonial powers for more than five centuries that any indigenous culture has been heavily influenced by the values and beliefs of these very colonialists. Most of the region had been part of the Ottoman Empire since the Fifteenth Century, and, as that Empire declined through the Nineteenth Century, partly owing to Turkey's proximity to Europe, a form of Ottoman Orientalism emerged and strongly influenced the littoral Arabic states of the Eastern Mediterranean and North Africa (Makdisi 2002). This phenomenon was the Ottomans' version of Modernism based on their interpretation of the European Enlightenment. They saw this Ottomanism as a progressive force, but, whilst it was influential amongst the educated middle classes of the region, it had less impact upon the population as a whole and barely impacted upon much of Egypt, the Hejaz (the area in the south of the peninsula which is now designated as the Kingdom of Saudi Arabia) and the states of the southern part of the Arabian Gulf, such as Bahrain.

1.2 An historical and cultural description of the region and its people

The image of a sophisticated and modern West, contrasted with an alien, backward and exotic East, is a dichotomy which only began to be fully developed since the final expulsion of the Islamic and Jewish communities from Granada in 1492 – coincidentally, the same year in which Columbus sailed from the Iberian peninsula, symbol of the Old World, to discover the New (Eco 1998). This was a pivotal year from whence the beginning of the divergence of cultures can be traced.

In the year 1000 the economy of the Middle East was at least as advanced as that of the rest of Europe (Kuran 2011) and in the previous three centuries, in Iberia at least, there was a co-existence of the communities of the three Abrahamic faiths – Christianity, Islam and Judaism based upon a shared and common set of core beliefs and values. From the time of the defeat of the Christian Visigoths in the south of Spain by the Islamic Umayyids, migrating from the North African Maghreb in Common Era (CE) 711, and for the ensuing seven hundred years, the Iberian peninsula was the crucible within which there was significant intermingling of the faith communities. The level of sophistication of Cordoba, was such that this region had paved roads, a use of sophisticated astronomy and mathematics and an understanding of Aristotelean logic

unrivalled in much of the rest of northern Europe, which was said to be in the Dark Ages at that time. Indeed the Islamic Philosopher Ibn Rushd (1126-1198), better known as Averroes, was a highly influential adviser at the court of the ruling caliphs in Cordoba. He translated Aristotle from the Greek into Arabic and was a great follower of scientific principles. He was said to have been highly influential in the development of the ideas of Catholic theologian Thomas Aquinas (1225 – 1274) (Gilson 2002).

Notwithstanding the now familiar Orientalist narrative (Said 1978), from at least the Second Millennium BCE, it has been argued that, in practice, it was the northern and westward migration of peoples from Mesopotamia via Phoenicia, on the shores of the Levant in the Eastern Mediterranean that actually brought “high culture and civilisation” to the “barbarous” West. It was the Phoenicians, for example, who devised the first recognisable and coherent written alphabet. In the late Bronze Age, with the invasions of the “Sea Peoples” from the Northern Mediterranean coasts, the Phoenicians were forced on a westward migration to Crete and to Carthage, in North Africa, and their subsequent movements took them further into mainland Europe. The Phoenicians allied themselves to the Etruscans in central Italy prior their defeat and absorption of that culture into the mainstream Roman civilisations (Ball 2010). Indeed it was only after the defeat by the Romans of the notable Carthaginian general Hannibal in the Second Century CE that the discrete elements of the Phoenician civilisation began to disappear. This marked the passage of their cultural identity, and confirmed Roman domination of the Eastern Mediterranean and its littoral states until the middle of the first millennium CE.

The birth of Islam

When the Prophet Mohammed was born in Mecca in CE 570, in modern-day Saudi Arabia, the Roman Empire was in decline, and the death of the Emperor Justinian, in the last decade of the sixth Century, accelerated the Empire’s loss of influence in its eastern provinces (Gibbon 1960). As Mohammed grew into manhood, the Prophet is reported as becoming increasingly discontent with the life in Mecca and he took to retreating from the city to the solitude of the surrounding countryside. It was here, in a cave in CE610, at the age of 40, Mohammed is said to have received the first of the divine revelations which led to the writing of the Qur’an. Mohammed’s preaching and his teachings of the existence of a single divine God were not popular amongst the polytheistic population of the city (Aslan 2006). Although he gained many loyal followers the group was largely ostracised by society and in CE622 he and his followers left Mecca for Medina (then known as Yathrib). This event, the Hijra, is taken as the beginning of the Islamic calendar. In the ensuing decade, from their base

in Medina, the Prophet and his followers were successful in consolidating the religion and converting the traditional peoples in the Arabian Peninsula to become followers of Islam. By the time of his death in CE632 most of these tribes were united as Muslims with a single faith (Holt, Lambton et al. 1977)

In his commentary on world religions, Max Weber was particularly interested in the inception and early development of Islam (Shluchter 1999). Weber identifies the three main phases in the development of the Islamic religion: the “birth” of Islam and its early “heroic age” during the age of the early caliphs (632-661) and the Umayyids (661-750), and its maturation during the period of the Abbasids (750-1258) which is generally regarded as the golden age of Islam. The sense of security and divinely ordained purpose which the new Islamic faith brought to peoples of the Arabian Peninsula together with the effective military campaigns of the early followers of the Prophet meant Islam rapidly became the predominant culture. The Islamic faith was not simply a belief system, in a metaphysical sense, rather it was, and remains for committed Muslims, a way of life with the Qur’an – the holy book, and the Hadiths – the teachings of the Prophet, dictating many daily practices and customs, with no division between the material, temporal and spiritual realms of human existence. During its first 500 years of existence, the Islamic faith was able to accommodate the emerging sciences such as astronomy, medicine and mathematics – particularly algebra, since they were not seen as threats to the existing order and people’s beliefs. Exploration and discovery flourished so that, by the Tenth Century, Baghdad had become the world centre for science and culture (El-Sanabary 1992). But it was in the Western part of the Islamic world, in the Maghreb and in Andalusia where most progressive thought and Aristotelian rationalism was tolerated. In the Islamic heartlands around Baghdad, where the influential scholar Al Ghazali was revered, as will be seen later in this chapter, scientific rationalism was rejected so that when the Ottomans began to take control of the region, from the Fifteenth Century onwards they were content to preside over a deeply religious society which had shunned the trappings of rationalism and modernism. This period of stagnation, in terms of economic and social development, is said to have remained until the collapse of the Ottoman Empire in the aftermath to the First World War.

The influence of the USA

The USA has taken an active geo-political interest in the region since before the end of the Second World War most significantly, it has been claimed (Gardner 2009), due to the oil riches of Saudi Arabia. Arising from the events surrounding the Iranian Islamic Revolution in 1979, the attack on the World Trade Centre in New York in 2001, the Gulf

Wars of 1991 and 2003, and the turmoil caused by the overthrow of many Arab governments during the so-called Arab Spring of 2011, the USA has played an increasingly important role in the region, both directly, through investment and political interventions, and indirectly through the numerous US-dominated supra-national organisation (SNO) and globalised commercial corporations. The stationing of America's Fifth Fleet in Bahrain makes a bold statement of the commitment of the USA to maintaining geo-political stability in the Gulf, as well as contributing significantly to the local economy. Notwithstanding the economic importance of the indirect foreign investment attached to the Fleet's presence, a mineral-rich state, ruled by an hereditary monarch, has less of an immediate economic imperative to develop their economy to embrace the information age. Indeed taking Peters' (2010) definition of the knowledge economy, which includes notions of openness and democratic accountability, for many absolute rulers in oil-rich states, there are strong disincentives to educating the populace to be critical and creative thinkers. As Friedman (2006) has said:-

"According to the first law of petropolitics, the higher the average global crude oil price rises, the more free speech, free press, free and fair elections, an independent judiciary, the rule of law and independent political parties are eroded. ... The higher the price goes, the less petroleader leaders are sensitive to what the world [or their citizens] thinks or says about them"

The oil-rich countries of the Middle East have been described as rentier states. "Rentier State Theory" is a set of ideas which seek to explain why states with considerable natural resource wealth appear to have very similar economic and political development trajectories. The concept of the rentier state was coined by Hossein Mahdavy (1970) when writing about pre-revolutionary Iran. Mahdavy described a rentier state as 'a state that receives substantial rents from foreign individuals, concerns or governments'; Hazem Beblawi elaborated the idea of the rentier state further, in the context of the Arab world, as a state in which the economy is dominated by rents, the rents come from abroad, and the government is the principal recipient of these rents (1987). Bahrain demonstrates the key characteristics of a rentier state as it continues to enjoy significant wealth from its windfall of natural resources. With an abundance of wealth from these natural resources at the rulers' disposal, the economic drivers to reform the existing social structures and galvanise a national economy towards wealth-creation have been slow to develop. As a rentier state it has had the capacity to provide a reasonable standard of living for its citizens, on the basis of benign redistribution of oil wealth, partly through the establishment of a

large public sector workforce. The development of the entrepreneurial spirit has been weak, and the private sector's contribution to overall GDP is very small.

The regional tension between the differing manifestations of Islamic fundamentalism and the rationalists is not, however, a modern, post-colonial phenomenon. The debate has existed within the Islamic community of believers since the very founding of the religion, and continues to this day, most clearly in the divisions evident between and within the Shia and Sunni Islamic traditions and beliefs. From an educational perspective this tension is reflected in schools curriculum which seeks to reconcile the received wisdom and immutable truths contained within Qur'anic teachings with the more rationalist and liberal discourse emanating from the countries of the Global North, such the United States of America, the United Kingdom and Australia.

Historical background to education in the region

The Arabs have an established education tradition going back at least 1300 years. Its origins run parallel to the time when the Holy Qur'an is said to have been revealed to the Prophet Mohammed and its subsequent dissemination as the basis of the Islamic faith. As a consequence of its close association with the alleged divine revelation to the Prophet, the foundations of education in the Arab world are very different from those from the liberal Western Socratic pedagogic tradition where the acquisition and development of knowledge is built upon questioning and underpinned with intellectual freedoms (O-Hear 1982). Three Arabic concepts align with the word "education": *Tarbiya* – to grow (from the Arabic root *raba*); *Ta'dib*– to be refined, disciplined, cultured (from the root *aduba*); and *Talim*– to know, be informed, perceive, discern (from the root '*alima*). These elements combine to form a notion of education as process where the learner grows, develops and comes to know the world through received wisdom and convention. Islamic educationalist do not see a discrepancy between 'revealed' and 'acquired' knowledge (Hartley 2003).

In the 100 years immediately after the death of the Prophet, the rapid development of Muslim Arabic civilisation brought it into close contact with Greek, Egyptian, Persian, Syrian and Indian cultures, and certain elements of these faiths came to be reflected in Islamic thought (Fakhry 1997). At this time there was an acknowledgement of the Aristotelian tradition in the pursuit of truth with the help of human reason. In this sense, three distinct forms of knowledge were defined as developing over this period:-

The first - *al-bayan* -was textually based and relied on the foundational texts of Islam taken from the Qur'an and from the sayings of the Prophet. This form of textual

analysis, with an emphasis on language and grammar is a fixed form, since it is only derived by interpreting and re-interpreting a fixed body of work. The second form - *al-irfan* - is a mystical knowledge which derives from a spiritually inspired inner state – this form of knowledge embraces the minority and more esoteric branches of Islam – Sufism and Shiism; the form is claimed to originate from eastern mystical traditions which predated Islam and include astrology, alchemy and numerology, and serve to create a universe of symbols and allusions. This tradition feeds and informs the aesthetic and cultural elements of Islam, but it resides in the realms of the imagination rather than being rooted in the material world. The third form of knowledge, or *al-burhan*, is based on causality and thus allows for the development of a rationality based upon natural laws. This last form of knowledge was capable of evolving into an Islamic form of modern rationality but it was held in low regard by the mainstream philosophers based in Baghdad, the capital of the Islamic world, since it derived from the western fringes of Islam in the Maghreb and in Andalusia rather than the eastern tradition, which is more associated with the birthplace of the Prophet (Al-Jabri 2006)

In the four centuries after the death of the Prophet, Islam was disseminated throughout the Middle East and North Africa through a network of privately supported religious institutions developed to promote the new religion. Education took place in the madrassas and great store was placed upon the mental skills of Qur’anic memorisation. For those with an ambition to become imams, religious leaders, these were places closely associated with the mosques and, along with the kuttabs, they were places where students learned reading writing and the rudiments of religion. These traditional sites of learning played the role of elementary schools and, in the more isolated parts of the Arabic-speaking world still continue to this day (El-Sanabary 1992).

A tension existed between the more rationalist philosophy of the Mu’tazilites, such as Abu Nasr al-Farabi (CE 870–950), said to be the second philosopher after Aristotle, and al-Razi ibn Sina (CE 980-1037), known more widely in English-speaking circles as “Avicenna”, and the more conservative Salafist believers. Al Farabi, for example, designed a school curriculum which stressed the importance of the natural sciences; the exploration of the nature and characteristics of elements in the material world, and the development of metaphysics to foster abstract thinking to help learners to understand the essence of being and begin to comprehend the nature of God (Gunther 2010). By contrast Abu Hamid al-Ghazali (CE1058-1111) reasserted the dominance of religion over reason. He was headteacher of the influential Madarasah Nizamiyyah in Baghdad in 1067. The founding of this educational establishment marked the

beginning of a sectarian system of education with a strong political bias. One of its main functions was to root in the public psyche the fundamentals of Sunni Islamic orthodoxy and to marginalise the more mystical Shia branch. However, the divisions between the traditionalist teaching rooted in the Qur'an, scientific rationalism and the transcendental spiritualism was not clear cut. Al Ghazali combined rationalism, mysticism and orthodox belief in way which is still evident today amongst many practitioners. Al Ghazali believed that reason and the senses allow humans to acquire knowledge of the visible material world, while revelation and inspiration permit them to discover the invisible spiritual world. Through perpetual learning and spiritual exercise humans attain "true" knowledge and become capable of comprehending aspects of the realm of the Divine. Al-Ghazali dissuaded students and teachers from pursuing the natural sciences , especially those that, in his view, contradicted religion.(Al-Ghazali 1963)

Al-Ghazzali was highly influential in the development of the Sunni strand of the Islamic faith. He attacked the use of Hellenistic philosophy in the context of religious belief and rejected rationalism, or rational scientific enquiry, as a basis for promoting wisdom and knowledge. Some commentators (Alawi 2009) claim that this rejection of philosophical rational enquiry by Al-Ghazzali is one of the most significant reasons why Islamic civilization failed to embrace modernity. By rejecting rationalism and undervaluing creativity and inspirational strands of thinking the mainstream systems of knowledge fell back on the early texts as the only true knowledge - *al bayan* – and the features of the more rationalist empirical forms were rejected, later to be subsumed into European thinking. Post-Reformation and Enlightenment European thinking succeeded in transcending the limitations imposed by religious dogma and enabled the development of science and technology based upon a rationalist discourse, and this represented a systematic break from the past. Meanwhile, the core beliefs and Islamic knowledge systems continued to revolve around the fixed body of text-based material which was fixed and immutable. Other commentators reject this view as being too "Orientalist" they argue that a rationalist discourse did not end at the time of Ghazzali, but that the philosopher Abu al-Walid Muhammad ibn Ahmad ibn Rushd, Averroes (CE1126-1198), defended the centrality of Aristotelean reasoning and maintained the importance of rationality(Gutas 2002). Indeed, Etienne Gilson (1937) has written that Rationalism was born in Spain in the mind of this Arabian philosopher, as a conscious reaction against the mainstream Arabian theology. Gilson suggests that when Averroes died in 1198, he bequeathed to his successors the ideal of a purely rational philosophy, an ideal whose influence was to be such that, even the evolution of Christian philosophy was to be deeply modified by it. In this respect, it can be argued that Averroes'

'philosophical rationalism' is not only five centuries earlier, but even more comprehensive than the 'mathematical rationalism' of Rene Descartes (CE1596-1650), generally regarded as the father of modern philosophy. Indeed, through the ages there have been individuals who have sought a more rationalist, humanistic interpretation of Islam. One such character was the Egyptian Muhammad Abdhu (1849 – 1905), he, and his great mentor Jamal al-Din "Al Afghani" (1838-1897), endeavoured to revitalise Islam after a period of stagnation and decline. Their arguments were firmly rooted in a dialectical tradition that is able countenance human reasoning (ijtihad) alongside an unreasoned acceptance of established religious authority (taqlid). Abdhu held that his humanistic approach to reform was rooted in the proposition that Islam is a religion that constitutes a set of moral virtues and an ethical system which are key to the realisation of an idealised and just society. In his day there were, nonetheless, those who condemned him as an heretic who manipulated the Islamic reform movement for his own political ends (Alawi 2009).

Notwithstanding the contested development of Arabic philosophy from the dawn of Islam to the present day, in practice, the education systems did not develop in a form which acknowledged the primacy of reason and rationalism. From the Fifteenth Century, when the Ottomans were assuming control over the Arab world, through their efficient military manoeuvring and effective administrative arrangements, they showed little interest in broadening the education of the Arab peoples, whom they regarded as subjects. They were, instead, content to erect a wall of religious orthodoxy between Islam and the West. For the Ottomans, the state took care of administration, economic and military affairs; with the religious institutions addressing themselves to doctrine, law, social relations and intellectual life, including education. Within this context education stagnated within the kuttabs and the mosques. These institutions were given the responsibility for an education process which was centred upon a notion of perpetuating traditions and acquiring knowledge rather than as a mind-broadening process (Kittrie 1989). Within the sheikdoms of the lower Gulf, what schooling that existed was largely provided by a local *mutawa'a* – a religious man who relied heavily on the rote learning of sections from the Qur'an of the of Prophet's homilies or *hadeeth*. These religious men were not well educated and they were unable to teach reading or elementary mathematics.

The demise of the Ottoman Empire at the end of the First World War led to the introduction of a more European style of education into the region, albeit with some divergence of education philosophy between the European conquering powers. The countries of the Levant – Syria and Lebanon, fell under French jurisdiction and began

to follow an identifiably French approach to education, whilst in Egypt, Transjordan, Iraq, Kuwait, Bahrain and the Trucial States the British oversaw local developments in education.

The knowledge economy in the Middle East

A critical review of the policy formations applied to this region from both SNO and commercial global conglomerates, in the form of technology corporations and management consultancies, reveals that their formulation and inherent socio-cultural assumptions take no account of the cultural traditions of the region, most notably the strength of the strong Islamic identity and the manner in which the culture and the faith is woven into the very fabric of government and society. The government structures in the Middle East spring from a culture which has not witnessed a seismic intellectual challenge equivalent to the European Renaissance and the Reformation which together served as the well-springs of the Enlightenment, and all that now derives therefrom within the globalised knowledge economy. In this sense, it is ironic indeed that Averroes, the Islamic philosopher working in the cosmopolitan and multi-ethnic city of Cordoba in Al Andalus, where Christian, Jewish and Islamic faith communities lived, worked and thrived side by side, was so influential upon European thought. At that time the Christian and the Islamic faiths shared a common struggle with the reconciliation of the core belief of predestination and the existence of an omnipotent creator and the need for a pragmatic rationality in people's day-to-day lives. The European Reformation, fuelled as it was by the neo-Platonist Renaissance, promoted the development of the ideas that led to people's reconciliation of daily life within a strongly faith-based community. Partly through the casuistry of influential church authorities, the money lenders and nascent banks of central Italy, such as Medici in Florence, were blessed by the Catholic Church and the loaning of money with the associated charging of interest enabled a strong merchant class to develop, despite the Biblical pronouncements against the sin of usury. No such reconciliation took place in the Islamic faith at that time. Instead the Islamic Umayyad dynasty, which had swept into the Iberian Peninsula in the Eighth Century, unseating the weak and enfeebled Christian Visigoths, was gradually squeezed out of what is now modern day Spain from the beginning of the Eleventh Century by the Norman Christian Crusaders from central France (Kuran 2012).

By the time the remnants of Muslim and Jewish communities of the Iberian Peninsula were finally expelled from their last stronghold in Granada, in 1492 (Hourani 1993), the Ottoman Empire had already conquered much of the littoral states of the

Mediterranean, as well as occupying much of the Balkans. The Ottomans, whose Empire did not finally collapse until the end of the First World War in 1918, were happy to encourage the continuation of daily life within their Empire in the Salafist mode of the early followers of the Prophet Mohammed. As Hodgson (1993) has observed, the Ottomans were brilliant administrators and warriors, and they were happy to leave such matters as education and social care to the mosques. Social historians have noted the coincidence of the Fall of Granada in 1492 with the sailing, from elsewhere on the Iberian Peninsula, of Christopher Columbus to discover the New World, thus laying the foundation of the 'Great Divergence' (Kuran 2012).

1.3 Education in Bahrain and the neighbouring Gulf states

In the Gulf states, when independence came, the countries acted with some accord in respect of education reform and modernisation with each of the six countries which were to become the nations of the Gulf Cooperation Council (GCC) following similar paths, in terms of their model school curricula. In the early 1970s the countries in the Gulf used syllabi which were largely derived for those of Kuwait. By 1983 the six wealthy Gulf states – Kuwait, Oman, Saudi Arabia, Bahrain, United Arab Emirates (UAE) and Qatar had formed themselves into the GCC, and these countries agreed to adopt unified curricula for mathematics and science for Grades 1–9 under the supervision of the Arab Bureau for Education in the Gulf States (ABEGS). Additional curricula were later developed with text books being produced for social studies and Arabic which had a common core but with individual local elements for each of the six member states (UNESCO-IBE 2006)

Owing to their common heritage, the education systems within the GCC have broad similarities. Boys and girls are strictly segregated and taught in single sex schools from the age of six. In these schools there is gender segregation of the staff in all but the primary schools. Women are never allowed to teach boys over the age of 11. Equally men cannot teach in senior girls schools, with the exception of male imams, who teach Islamic education in girls secondary and high schools. Islamic education is a prominent feature of the curriculum in all of the schools, not just as a subject but as a philosophy which is promoted throughout the schools. The wider curriculum itself is formally prescribed by the ministries of education, there are many subjects and there is a great deal of content knowledge to be assimilated. The emphasis is on facts rather than skills. Memorisation is an important trait for students to develop since the regular examinations rely heavily upon the testing of knowledge rather than the demonstration

of the application of knowledge to solve problems. There is no choice within the prescribed curriculum until the age of 16 years. At this stage students are required to follow one of three tracks: a science, an arts / literary, or a vocational track, depending upon their performance in tests at the age of 15. Whilst there is, notionally, some choice as to which track students follow, in practice, the most able follow the science track and the lowest achievers take vocational subjects. In these curricula, there is little variety, nor is there scope for originality or creativity and, even in the arts/literary stream, there is a great deal of factual science taught within the compulsory core curriculum.

There is no automatic annual progression for students through the school grades with their age-related cohort. A policy of grade retention and repetition means that students who do not pass the annual assessment examinations at the end of each school grade are retained in that grade and they repeat it. The proportion of students who are repeating a year, sometimes more than once, is between 5 and 10 per cent; it varies between the MENA countries. The policy is most marked in its implementation in the Gulf States and it is least prevalent in Jordan.

The schools' have common management structure consisting of: - a principal, vice or assistant principal; and a social worker as part of the senior management team. The schools, however, enjoy very little discretion and local autonomy in respect of curriculum, organisation and staff deployment. The staff are appointed by the ministries of education who directly line manage them (i.e. the principal does not, strictly, have line management responsibility for the teaching staff at his/her school). The determination of the teaching load, the performance management, monitoring and deployment of staff is carried out by the ministry of education officials, known as supervisors, external to the school.

Demographic context of Bahrain

The Kingdom of Bahrain consists of 33 islands in the Arabian Gulf with a total area of less than 700 square kilometres. The main island is situated approximately 24 Kilometres off the east coast of Saudi Arabia and 28 Km north of Qatar. Most of the islands are small and uninhabited and the great bulk of the inhabitants resides on the two main islands – Bahrain and Muharraq. On the main island, the size of which is only 16Km from east to west and 60 Km north to south, is located the capital city, Manama, where most people live.

In 1932 Bahrain became the first Gulf state to discover oil in commercial quantities and with the income from oil there followed a marked improvement in health and education services at that time. Its reserves are, however, relatively small, by Gulf standards, and to compensate for a dwindling of oil revenues the government has been striving in recent years to develop and diversify the economy into financial services and information technology. It gained independence from Great Britain in 1969, declared itself to be a kingdom in 2002 and became a constitutional monarchy in 2004, with an elected lower chamber of parliament and an independent judiciary. However, all decisions made and legislation proposed by the lower house of elected representatives must be referred, for consideration, to the Shura Council (an appointed body) prior to be ratification by the King. In practice, the Shura Council's power of veto prevents the elected house from enacting any radical measures which would threaten the status quo. The King is part of the Khalifa royal family, from the Sunni branch of the Islamic faith, which has ruled over the Islands for more than 200 years, notwithstanding colonial interventions. The monarch's power of veto is a significant constraint upon the democratic ambitions of the majority Shia population on the island. The population is approximately 1.1 Million³, and as well as a sectarian split in the indigenous population between the Shia and Sunni sects, proportionately, about 70 to 30 per cent, there is an expatriate workforce which constitutes about 50 per cent of the total population on the island. In the wake of what became known as the Arab Spring of 2011, members of the Shia population occupied parts of the capital, Manama, and demanded significant constitutional reform from the government. After some weeks, the protests were becoming increasingly violent and on March 17th Bahrain's monarch, King Hamad, decreed a national state of emergency and invited over 1,000 peace-keeping troops into the country, across the causeway which links the small island state to mainland Saudi Arabia. The force which occupied Bahrain did so under the auspices of Operation Peninsula Shield, an arrangement between all six the Gulf Co-operation Council (GCC) member states which maintains that if the security of one state is threatened then its Arab neighbours would come to its assistance. Within Bahrain there has been, since before its independence from Great Britain in 1969, a deep suspicion of the Iranians, who are almost exclusively Shia Muslims. The Iranians maintain a territorial claim over several of the islands in the Arabian Gulf which lie between the Arabian Peninsula and Iran and there were suggestions that the Iranians were behind the Shia uprising in Bahrain. Despite a lifting of the state of emergency in June 2011, and a return to some semblance of normality to the streets, the secular

³ 2011 CIA Book of World Facts

conflict between Shia and Sunni remains strong and significant and it is played out daily in many of the 230 government schools in the country.

The government school system in Bahrain

Although the American Missionary Society had opened a school in 1899, run by Amy Zwemer, the wife of the missionary Samuel Zwemer, the first public school did not open in Bahrain until 1919 (Hanna 1991). This boys elementary school on the island of Muharraq, named Al Hidaya, was funded by local subscriptions and donations from wealthy merchants and it received a government subsidy for its running costs. The opening was significant because it was the first organised school with a planned curriculum and, moreover, it was initiated and run by the local people. The curriculum was mostly religious with some elementary reading, writing and arithmetic based upon the syllabus operating in other Arabic countries, and with teachers from Syria and Egypt. At the time it was described as a 'lighthouse of modernisation', one example of which was, in 1925, the school staging of the first play in Bahrain – 'Al qa di bi Amrit-Illah' (The Judge in the Name of God) (Hanna 1991).

The first public school for girls opened in 1928, in Muharraq. The opening was in response to a demand from progressive Bahrainis, but it was opposed by the more conservative Sunni leaders. However, although the principle of girls education was denounced by many religious leaders, a few years later another girls school opened in the capital, Manama, and public support for girls education continued to grow thereafter (Shirawi 1989).

Several new schools were founded at this time, both on the island of Muharraq and in Manama. In 1933 all the schools were amalgamated under the single jurisdiction of the government. Even in such a small country, it is surprising to discover that the curriculum followed by students in the towns, as opposed to those in the villages, was not uniform. The village schools followed a basic programme of initial reading, writing and simple arithmetic; whereas in the towns of Manama and Muharraq there were more advanced studies in Islam and Arabic culture, language and literature as well as arithmetic and geometry (Shirawi 1989). In 1936 the first technical schools in Bahrain were established, for students aged 14 and over. Two classes of carpentry and mechanics were created. This early establishment of technical and vocational education led to Bahrain developing a reputation amongst its neighbours, notably Kuwait, for vocational provision. Up until this time technical and vocational education had not been recognised as a priority in most of the Arab states, and it continues today

to be seen by most to be of lower-status. In this respect, Bahrain is unusual in the Arabic-speaking world – enrolments of students on technical and vocational programmes amount to 15 per cent of the student population, which is high when compared, for example, with 5 per cent in Jordan and just 0.5 per cent in the UAE.

The technical details of the government school system in Bahrain are contained in Appendix 1). The appendix contains the aims and objectives of the education system; the curriculum model for primary, intermediate and secondary schools and procedures for assessment and progression between the phases.

Education reform for the knowledge economy in Bahrain

By way of an introduction to the empirical part of this study, this section is concerned with changes, or rather policy intents, that have sought to modernise the education system. The globalised education technology agenda has its expression in contrasting ways in different parts of the Arabian Peninsula. In the north of this region, Jordan has a series of policy objectives underpinning its Education Reform for the Knowledge Economy (ERfKE) project which are broad-based across schools and local industry in a way which is reminiscent of the early days of educational technology in England in the 1980's through the Micros in Schools project and Microelectronics in Education Project (Fothergill and Anderson 1981), with policy objectives which include the development of the indigenous IT supply industry notably that as well as education aims (Chisholm and Steiner-Khamsi 2009). In Bahrain the policy objectives have never included such an explicit commitment towards extra-educational industrial aims and objectives, but the policies have yoked educational technology to the development of a series of broader-based skills for learning and skills for life.

Although displaced by almost half a century from the expressions of modernism and scientific certitude evident in the speeches given by US and UK politicians, for example, John F Kennedy's speech announcing the lunar exploration programme and Harold Wilson's speech about the 'white heat of technological revolution (Kennedy 1962), the enthusiastic and ambitious launches of the Education Reform for the Knowledge Economy in Jordan, and in Bahrain, the King Hamad School of the Future project have used many of the same rhetorical devices (Eqab 2003, Bannayan, Guaqueta et al. 2012, WEF 2012). This is in keeping with much of the hyperbole-filled educational technology related policy making in many parts of the world (Zhao and Frank 2003)

“Since 2001, the MoE decided to draw a strategy to employ ICT in education, not just providing computer laboratories with equipment and teaching computer as a subject matter, but developing new environment for eLearning too, in order to face the national development requirements and to get benefit from the opportunities offered by the big technological innovations in this field, especially after spreading and development of the internet.

“ On 19th May 2002, the Cabinet approved in its session No. (1684) the formation of a working group to set a proposal for science, technology and innovation within the framework of the Bahrain future vision chaired by HE the Minister of Education. It includes a focal point at the MoE to cover ICT in education.

Their efforts were crowned with the initiative of His Majesty King Hamad Bin Isa Al-Khalifa, the King of Bahrain, who patronized this project and gave it His Majesty’s name as a direct support and appreciation from him towards this important project for the Kingdom prosperity, and transforming Bahrain to developed stage in education that produces the best citizens. This project is considered as a substantial turning point from traditional education to ICT future-based which will support the Kingdom’s direction to transform the government to transform the government work to e-government system” (See Appendix 3).

Page 82 in the report indicates the bases upon which the project were established : a UNESCO team report of 2001 which “included broad plans directed towards this project and showed the good European experiences” as a reference (UNESCO 2004) - pages 38 – 40 contain how the MoE plans to introduce IT systems; page 62 – 69 contain “Educational content and learning strategies for Twenty-First Century”. The report is not explicit about the exact nature of these “good European experiences” in respect of educational use of technology.

The ICT-related reforms in both Jordan and Bahrain share a common theme of modernisation: in Jordan the message was quite explicit, the reform was entitled “Education Reform for the Knowledge Economy” (WEF 2012), in Bahrain the early stages of the education reform initiative, in 2005, operated under the theme of the King Hamad School of the Future project. However, under guidance of the management consultants McKinsey (Appendix 2), from 2007 the modernisation and reform programmes latterly developed a much more ambitious series of objectives over and above the application of learning technologies in the classroom for the development of Twenty First Century Skills. In the cases of both Jordan and Bahrain, there has been an inbuilt assumption that in order to modernise their education systems there had to

be a significant investment in the hardware and infrastructure of educational technology, so much as to say that it is not possible to be modern and for students develop the skills necessary to function effectively in the Twenty First Century without ICT skills (Eqab 2003).

The events of the “Arab Spring” which swept across the Middle East in early 2011 have created a volatile context within which to undertake this research. In Bahrain there has been, at least in public pronouncements, a degree of commitment shown towards the democratic ideals implicit within the discourses related to the knowledge economy and the Twenty First Century Skills agenda (Partnership_for_Twenty-First_Century_Skills 2004, Pearlman 2006, Facer 2011, Saavedra and Opfer 2012); but, in practice, the democratic ideals have not been strongly evidenced. When considering the different trajectories of reform in the two contrasting kingdoms in the north and in the south of the peninsula, it should be acknowledged that the reform programme in Jordan had begun earlier and had the chance to become more firmly established than that in Bahrain prior to the events of the ‘Arab Spring’. Moreover, in Bahrain, the political, and social tensions that militate against the forces of modernisation, change and uncertainty, are much more in evidence than they are in the more westward-leaning Kingdom of Jordan. Nonetheless, both countries represent clear examples of the wave of national education policy reform which has taken place, over the past decade in the complex and challenging social environment of the Middle East, and which have consistently embraced educational technology as a necessary component (Chapman and Miric 2009). In most cases the reform policies placed educational technology and new teaching methodologies related to modern instructional technology as high priorities. In Bahrain, The King Hamad School of the Future (KHSF) initiative put an emphasis upon the implementation of educational technology (Eqab 2003). In Jordan, as part of the MoE’s Education Reform for the Knowledge Economy (ERfKE), the Jordan Education Initiative (JEI), was given the role of spearheading the reforms in schools through promoting the use of information technology as a tool for innovation in the classroom, (JEI 2009) but also to develop the local education-related IT industries. In Bahrain, from 2007, alongside the KHSF programme, an ambitious national education reform project was also implemented. All schools in Bahrain were scheduled to be provided with broadband internet connections, and equipped with at least one ICT suite, often a purpose built ‘KHSF Suite’ as a specialist facility, many classrooms

were to have data projectors and several classrooms were also to have interactive electronic whiteboards⁴.

Bahrain – the King Hamad School for the Future Project (KHSF) and the subsequent education reform programme

The Project formally began its implementation in 2005 (Eqab 2003) ; it was framed within a strategic outlook which had the following objectives:-

- * Continuing economical and social development
- * Investment in knowledge - technical competition
- * Developing a knowledge society
- * Educational system based on employing educational information and communication technology
- * Developing the educational system in the Kingdom and elevating its products
- * Accelerating the pace of human development
- * Establishing an Information Society
- * Building a Knowledge-Based Economy

The KHSF project started with 11 pilot secondary schools which were distributed over all five of the governorates of this small island kingdom and by 2010 all the schools in the Kingdom were considered to be part of the project. The project was aimed at maximising the use of ICT for teaching and learning with four main components:-

Electronic classes

Multi-purpose electronic teaching system

Linking schools electronically

Electronic learning resources centre to facilitate teacher training (so that all teachers gain the International Computer Driving License (ICDL))

However, at its launch the project contained a large number of much more far-reaching and ambitious objectives, as the following quotation from the initial promotional materials for the project indicate⁵ (Eqab 2003) :

⁴ See Appendix 3 – note that the original IT project was focused on secondary schools; see UNESCO team report of 2001 which reports on the introduction of the internet into learning resource centres in secondary schools in 1997/8

⁵ See Appendix 4:235

“A Glimpse of the Project”

** It is a fundamental turning point from the traditional teaching-learning process to a future process based on technological employment.*

** It provides a learning environment for the students, teachers, administrative staff, and society that allows interaction at any given point.*

** It is an ideal solution to the demands of e-learning which covers a large number of users at once.*

** It is an educational model which contains teaching and learning tools, as well as tools of assessment.*

** It completely changes the limited resources of the traditional class environment to an open interactive motivated environment which improves the learning process, and helps benefit from various information resources:*

** Allows every student to learn according to their ability, at the same time taking into consideration the different learning abilities of the students.*

** Allows teachers to interact with students, and continually assess them individually.*

** It helps students to benefit various positive skills and values illustrated by:*

** Embodying cooperative learning*

** Developing assessment and building skills.*

** Developing artistic thinking*

** Reinforcing criticism and assessment skills*

** Reinforcing conversation skills*

** Developing students' personality and enabling them to generate knowledge, and not just be a recipient of it. It also enables students to be active members of an information society based on economic knowledge.”*

A great deal of imagination and blind faith in the transformational powers of technology is required to see how these wider and more ambitious aims of the KHSF project could be realised simply by hardware deployment and staff training in the operation of the technology. In practice, schools that acquired computer hardware, mostly in the form of interactive electronic whiteboards and data projectors did so many months before they had received any operational training on the equipment, and before any plans for transforming pedagogy were conceived. It became apparent that a much stronger and systemic education reform programme would be necessary to realise the much wider project goals.

Whilst not implying a causal link between the earlier weaknesses in the implementation of the KHSF and subsequent educational policy developments, it should be noted that in 2006 the management consultancy company McKinsey and Co was appointed to

devise a more broadly based education reform programme. An Education Reform Board was established and a team from McKinsey and Co, led by Sir Michael Barber, was commissioned to make recommendations within the context of the much wider national ambitions set out in a Bahrain Vision for 2030 policy, the implementation of which would be overseen by the Crown Prince, Prince Salman bin Hamad Al Khalifa, himself.

The Education reform proposals were radical, and based upon a rigorous analysis of both the current shortcomings in Bahraini schools and the evident successful education reform initiatives in other countries. The initial moves by McKinsey were to establish a quality assurance model within the Kingdom, and to undertake a pilot review of 50 of the 212 schools overseen by the Ministry of Education using these results, coupled with the poor showing of students in Grade 4 and Grade 8 in the TIMSS tests, in 2004, to address the “crisis” and provide radical policy solutions.

The Education Reform and Improvement Agenda Established by McKinsey & Co⁶

Reform themes

Ambitious and shared vision for excellence

Student focused school leadership and management

Teaching that drives Student learning and development

Developing our teachers

Learning for work

Ensuring all schools are creating a safe environment for learning

Setting high performance standards in schools and forming active partnerships between the MoE and the schools for performance accountability

Supporting schools to perform

In order to achieve the ambitions contained in these themes significant culture change was advocated as follows:

- *From entitlement to meritocracy*
- *From individualism and secrecy to collaboration and transparency*
- *From hierarchy and control to empowerment and accountability*

⁶ see appendix 2: for fuller details of the agenda advocated by McKinsey and Co.

- *From blame and punishment to learning and development*
- *From subjective opinion to evidence-driven decisions*
- *From exclusion and intolerance to respect for all*
- *From bureaucracy and fire-fighting to strategic action*

Having established the objectives and advocating the culture changes necessary to bring about change, the consultants from McKinsey & Co then created a strategy for achieving the objectives. The first part of the strategy was to establish two entirely new corporate bodies independent of the Ministry of Education, one was the Quality Assurance Authority, and the other was to create a new teachers college with a new curriculum that was commissioned from the National Institute of Education of Nanyang University in Singapore. Next there were several specific interventions at a school level (using international consultants) to bring about improvement, through five School Improvement Initiatives (SIIs), each led by its own project themed teams each led by an international (mono-lingual English-speaking) education consultant as follows:

1. Excellent schools
2. School leadership for performance
3. Teaching for learning
4. Developing our Teachers
5. Learning for Work – The Secondary Vocational Education Programme

The implementation of these significant and far-reaching education reforms was taking place during a period of considerable civil unrest on the island which culminated, in early 2011, in a three month state of national emergency during which time civil rights were suspended and martial law was imposed. Despite these conditions, the reform agenda was, ostensibly at least, adhered to; but the outcomes were, inevitably, influenced by the state of nervousness and national tension during this period⁷.

⁷ The Al Khalifa dynasty, which has ruled Bahrain since 1783, was confirmed as the ruling authority at the withdrawal of the British Colonial mandate in 1971. In the powerful position of Prime Minister is Prince Khalifa bin Salman al Kahlifa, uncle to present ruler King Hamad bin Salman al Khalifa. The Prime Minister has been in this post for more than 40 years, with no democratic mandate or accountability; he represents the conservative and traditionalist view of society. The Crown Prince, son of the King, and great nephew, of the Prime Minister is the representative of the forces of modernisation and reform, he oversees the work of the Economic Development Board and the Education Reform Board. During the period of national emergency, provoked by the civil disturbances related to the Arab Spring, schools were often places of conflict and disturbance and disruption. In these circumstances the education reforms were seen as low priority by most school principals.

1.4 Conclusion

An evaluation of the government education systems in the region must take account of the fact that the social and cultural developments in the Middle East have followed largely different trajectories to those of the countries of the Global North (GN), where most of the education reform initiatives have arisen. The education systems in these GN countries represent an orientation of education policies that closely mirrors the geo political and economic developments of an increasingly globalised economy. From the perspective of social development, the basic tenets of the Islamic faith and the regular expression, through the ages, of fundamentalist Qu'ranic interpretations by the socially conservative Salafists, together with centuries of Ottoman and then US/European colonialism, have resulted in a region that, for the whole of the past century and before, has sought to reconcile somewhat contradictory interpretations of the human condition. This conflict is manifest in a social system that is strongly influenced by collectivist theocratic determinism and yet the rulers endeavour to project an economic and political ideology of a globalised free market that requires individuals to behave as purposeful and autonomous citizens who make free choices and consume products. From an economic perspective the poorer countries of the Middle East have had the capacity to do little other than abide by politico-economic policy interventions (Jones 2009), the agendas of which have been determined by the former colonial powers (Kuran 2012); whilst the wealthier rentier states of the Gulf Co-operation Council have followed the lead given to them by several supra national organisations (SNO) for example, the OECD, UNESCO, World Bank, in order to demonstrate the credibility of their regimes and to gain influence in the international financial markets.

The countries that constitute this study have a deep and close involvement with American corporations, in the case of the JEI in Jordan, the partnership is through the major US IT corporations, in the case of Bahrain, no such commercial partnerships exist directly with the major IT corporations, but consultants from the American management consultancy company, McKinsey & Co, are the major architects of the ambitious education reform programme in the country. In this way the wider neoliberal agenda of transforming education into a process of human capital formation is an abiding theme, both implicitly and explicitly.

The education reform programmes in Bahrain have taken a quite different trajectory from those of, by comparison, Jordan, where the hardware-led JEI-sponsored Discovery schools were at the forefront of an initiative that is not just about education reform, but which is also concerned with developing an indigenous IT supply industry

for schools. In Bahrain there was never any explicit linking of the project aims with the support and development of an indigenous IT supply industry. In Jordan, quite apart from any changes which may or may not have taken place in schools, the educational IT supply industry is now thriving, partly related to the JEI activities, with companies exporting regionally and internationally: there are eBook publishers – Menhaj; an electronic whiteboard manufacturer – Intejaz; and a successful software company ITG which has even exported its tailor-made learning platform – Eduwave – to at least one state in the USA. Bahrain was the first Middle East customer for the Eduwave learning platform. Indeed, it is said that it was the King's own personal initiative on returning from the launch of the JEI at the WEF Dead Sea conference in 2003, that led to the KHSF project to be energised⁸.

Whilst in the early stages being 'hardware led', the education reform programme in Bahrain has been different to that in Jordan, whose policies it has been seeking to emulate. The initial years of the implementation of the KHSF were beset with technical difficulties, and although the roll out of specialist ICT suites took place according to schedule, the utilisation of educational technology has been weak. A review of the ambitious objectives of the KHSF illustrates the high hopes with which the project was launched leading to a wished-for technologically driven education transformation. There may be an implied 'causal link' between the shortcomings of the KHSF project, in terms of its broader transformational agenda, and the engagement of McKinsey & Co to recommend and plan a deep education reform programme, but such a causal link is unlikely to be found. In the rentier states of the Gulf, such evidence and data driven decision making is rare. In this region it is common to have parallel projects running which, whilst ostensibly sharing common objectives, frequently operate quite independently of each other. As Hertog (2010) found in his study of the government bureaucracies in Saudi Arabia, many large scale government projects are frequently overseen and operated as the jealously-guarded personal domains of particular Crown Court members, rather than as part of a coherent and planned series of linked policy objectives. What is clear is that, unlike in Jordan there has, in Bahrain, been no local industry capacity building, so whereas Jordan and the JEI can be held up as an example of South-South co-operation (Steiner-Khamsi 2004) there been no similar development of an export-driven indigenous IT industry in Bahrain.

The next chapter charts the origins and development of the linked concepts of globalisation and the knowledge economy. Its purpose is to place the study within the

⁸ personal interview with a government adviser

framework of the much wider agenda of the neoliberal imaginary (Ball 2012). Within this globalised policy construct the IT industry plays a major part, especially in its rebadged incarnation as ICT. The interposing of the 'C' between the more familiar initials of the information technology industry has been traced to the incoming New Labour government in the UK in 1997, and the influential Stevenson report (1997) which the new government had commissioned. The intention of the report had been to provide the impetus for the enhancement of IT use in UK schools. Part of the basis of the report was a study undertaken by McKinsey and Co which had highlighted the shortcomings then present in schools' use of technology, but which had also pointed forward to the need to use technology as a harbinger of social change – with the IT itself being seen as a material-semiotic actor rather in the same way as Digital Denmark report which Jensen and Lauritsen (2005) analysed, and which led them to propose the 'magical powers' with which policy makers imbue technology.

The reasons for the commonalities of the neoliberal underpinnings and the remarkable similarity of educational technology policy documents which Zhao and Conway (2001) have observed, become clear through the remarkable interlinking and common agenda-setting between the major multi-national conglomerates in the globalised knowledge economy which Steven Ball has highlighted in his book *Global Education Inc.* (2012). The important point to stress here is that such is the ubiquity and embeddedness of these interconnecting networks between global conglomerates and the SNO that each part of the industry serves the needs of the other. For example, a report by the management consultants McKinsey & Co may advocate IT solutions which would stimulate the demand for Microsoft products in schools, which, in turn would require the acquisition of Cisco networking products connected to data centres linked to remote server farms packed with Intel processors whose data they are processing is constantly mined by the eponymous Google Corporation. This analysis has become commonplace amongst theorists critical of the neoliberal age through which the world is passing, what is less commonplace is the place which this agenda has within the volatile and challenging region of the Middle East and North Africa.

Chapter 2

Education in the Globalised Knowledge Economy

2.1 Introduction

This chapter considers the twin influences of globalisation and the knowledge economy (KE) and how they have impacted upon the education systems in the region. In the space of just one generation the Middle East countries have had to accommodate profound changes in social organisation and in the expectations of burgeoning youthful population (Dhillon and Yousef 2010). This population, which has had ready access to social media, films and TV-series from the Global North, has had their awareness raised in respect of the social and democratic freedoms enjoyed by their contemporaries especially in Europe and North America. The young people have begun to question the social and cultural mores of their parents' generation and this represent a significant shift and a change from the social, religious and cultural attitudes and expectations of previous eras. The education systems in the region had to develop rapidly in the few decades after independence from colonial rule, and over this time there was little opportunity to stabilise and consolidate their position before the supra-national economic forces and the Globally Structured Agenda for Education (GSAE) (Dale 2000) came to dominate their priorities. This agenda, with its common core curricular characteristics, and a strong emphasis upon standardised testing is a product of the global age. The chapter begins with a consideration of the phenomenon of globalisation and with it the set of neo-liberal principles that constitute the Washington consensus outlined by Williamson (1993) and the rise of the supra-national organisations (SNO) and how these organisations' role has increasingly been to set, rather than just to influence, economic and social policies in most parts of the developing world. The account highlights the response of the Arab world to these forces of modernisation, the responses have tended to cleave in one of three directions – to deny the modernist agenda and recede into the Islamic traditions; to embrace the new agenda and, with it, to accept the inevitability of the march to modernism; to adopt a pragmatic approach, which tolerates the new whilst still attempting to adhere to solid and secure traditional structures, most notably the patriarchal family. In this study, the juxtaposition of the modern with the traditional is viewed through the lens of Bahrain and the Arabian Gulf states.

Since knowledge is now seen as a highly tradable commodity this chapter considers Peters' three interlocking aspects of the KE – learning, creativity and openness and particularly how these can be addressed in the context of the Gulf states. The learning

economy is considered through the state education systems, and how the clear education deficit led to the involvement of the SNO from the Global North, and, in particular, the USA in an attempt to stabilise and influence the social development in the region in the wake of the Islamic revolution in Iran of 1979 and the Algerian crisis of 1991. The involvement of the regional ministries of education in the international testing regimes of TIMSS and PISA is noted, and the suitability and appropriateness of such international performative success measures is questioned. The chapter concludes with a consideration of the local suitability and the impact of the GSAE.

2.2 Globalisation

The concept of globalisation, whilst not a novel construction, assumed heightened contemporary relevance in the light of the economic crisis, provoked by sudden increase in oil prices in the early 1970s. The social historian Eric Hobsbawm has described how globalisation differs from internationalisation (1994), but, as Harvey (2000) has observed, from at least the year 1500 the internationalisation of trade was well under way and that this was a prototypic example of modern capitalism. Peter Dicken agrees that the increasing spread of economic activities is not a new phenomenon, but he maintains that the globalisation of economic activity is much more complex, and qualitatively different, because it implies a “degree of functional integration between internationally dispersed international activities” (1986) . Harvey (ibid :54) uses the term globalisation to signal the emergence of a profound geographical reorganisation of capitalism, which in itself provoked changes in the way states regulate the conditions for the production and accumulation of capital. Cox (2002) has described the production of a burgeoning mass of precarious and permanently excluded people who are the victims of the advances of globalisation. Although the terms ‘globalize’ and ‘globalism’ were emerging in the 1940s, it was in 1961 that the word ‘globalization’ first entered the dictionary of American English (Robertson, Novelli et al. 2007). Subsequently, Roland Robinson’s work (1998) has been influential in the use of globalisation as a key analytical construct in the academy. Arjun Appadurai (2000) has been critical of the academy as a privileged intellectual class which is not sufficiently engaged with the victims of globalisation, as highlighted by Cox (ibid). Robertson (2006) has acknowledged the shortcomings of the academy in respect of research on globalisation and education, and the lack of research on alternative forms of knowledges and on the implications on national education systems in face of global educational governance.

In 1983, the economist Theodore Levitt had used the term globalisation to describe changes in the global economies affecting production, consumption and investment

(Stromquist 2002). At that time it quickly became adopted by many sectors to describe common occurrences in many different segments of the world's peoples. Currently, it has become a convenient expression to encompass a wide variety of phenomena. In its most all-embracing definition Porter (1999) states it simply as "The process by which the peoples and nations of the world are increasingly drawn together into a single entity". Arjun Appadurai speaks of "global culture flows" which disrupt the existing separateness of nation states (1993). His argument is that growing interconnectedness through travel and electronic communications have helped to create global institutional forms which are "both instances and incubators of a post-national global culture". Drucker (1994) observed that "education will become the centre of a knowledge society and schooling a key institution".

The Danish political philosophers Holm and Sorenson (1995) summarised globalisation as being the "intensification of economic, political, social and cultural relations across borders". Olssen (2004) provides a useful definition which contrasts the two faces of globalisation in what he terms Globalisation I and Globalisation II. The former has associations with the benefits globalisation and its emancipatory features, such as cheap international travel, interconnectedness and a sharing of cultures; the latter is associated with the uncertainties resulting in a world of diminished nation states, abolition of tariffs, unfettered free trade and the collapse of the fixed currency exchange rates enshrined in the Bretton Woods agreement. This notion of an interconnected and increasingly inter-dependent world, sharing a common set of ideals and values was crystallised with the breaking down of the Berlin Wall in 1989 and with it the collapse of communism and, apparently, the economic alternatives to capitalism (Fukuyama 1992). In the Middle East, the loss of the power and influence of the former Soviet Union – which had been active in many parts of the region, especially Egypt, Syria and Iraq – meant that for economic survival countries were strongly impelled to follow the free market objectives of the USA. John Williamson (1993) summarises the 'Washington Consensus' of this post-Cold War world in the following way:- he identifies ten features of the consensus:- fiscal discipline, public expenditure priorities, tax reform, financial liberalization, floating exchange rates, trade liberalization, foreign direct investment, privatization, deregulation and property rights. Taken collectively these features or principles influence the direction in which national policy decisions have been made, and which form the linked agendas of many SNO.

One key element has been the growing power and influence of these SNO as an added dimension to national policy-making, which is significant because of the inbuilt global and neoliberal assumptions therein (Robertson and Dale 2009). This is not to

say that the policy influences have been entirely coercive or mandatory, in many cases governments have, apparently, willingly embraced the global agenda. Rather the arguments are designed to illustrate the growing together of the policy agendas in many nations so that each begins to show a striking similarity to another (Dale 2000). A case in point here is the almost international consensus about the importance of educational technology in the school curriculum, the interconnectedness between educational technology and the development of the Twenty First Century skills that serve the Knowledge Economy, and the increasingly evident emphasis upon skills for life and lifelong learning. This is coupled with a view that education and, specifically, education reform, are linked processes for improving the development of human capital for national economic benefit – the ‘state theory of learning’ (Brown, Lauder et al. 2008). In stark contrast is the Enlightenment view of education which has seen it as a process akin to nation building and the development of autonomous, critical and self-aware citizens who are able to engage in the democratic process as responsible, discerning and reflective individuals (Tinkly 2004).

One of the key segments where globalisation is evident is education since, as Roger Dale states, “Formal education is the most commonly found institution and most commonly shared experience of all in the contemporary world” (2003). By contrast, Neo-institutionalists (Ramirez and Boli 1987, Meyer and Kamens 1992, Meyer, J et al. 1997) argue that schooling, based upon a Western concept of knowledge and upon Western cultural ideals, is very widely evident across the world and that this has led to a common set of educational structures and a common curriculum in many countries. They argue that this common model is now most generally evident because it is ‘the best’. In their survey of the world’s primary curricula, the world culture theorists, Meyer and Kamens (ibid) conclude that “through this century (Twentieth) one may speak of a relatively clear ‘world primary curriculum’ operating, at least as an official standard, in almost all countries”. This model of schooling is based on the belief in the educability of all people as an entitlement, and the importance of education in maintaining economic and democratic rights. The analysis of supporters of this interpretation see all cultures gradually being drawn together into a single world culture and that nation states now draw upon this world culture when planning and reforming their education systems.

This “Common World Education Culture” which Meyer and his colleagues have put forward has been challenged by Dale (2000) who has spoken, rather, of a Globally Structured Agenda for Education (GSAE). This latter approach as Dale has stressed marks the importance of Global or ‘extra-national’ forces whose policies are directly impacting upon education in all parts of the world in different education systems.

Globalisation creates pressures for international convergence, but in doing this it exerts pressure on local actors to increase the autonomy with which schools can operate, free of direct control of national government. As a consequence, it has been argued that the effect of globalisation upon education creates forces acting in opposite directions; there is simultaneous centralisation and devolution of authority. This squeezes power from the middle levels of educational administration with a transition towards more central state control and target-setting in the light of international comparative performance tables derived from standardised testing, whilst at the same time devolving responsibility and accountability to local actors (Davies and Guppy 1997).

Globalisation, ICT and the World Bank

In a similar vein, Held (2007) states that rather than there developing a growing interdependence between nation states, the concept of globalisation describes a shift away from discrete nation states to the world as a shared social space. Central to this shift is the development of educational technology and universal connectivity. It is argued by leading social scientists that technology is not a neutral agent, since it has the power to amplify the trends rooted in social structure and institutions: oppressive societies become more so with the new surveillance tools, while democratic participatory societies have the opportunity to enhance their openness and representativeness by further distributing political power with and through technology (Castells 1997).

Several commentators (Gabbard 2000, Kuehn 2001, Apple 2005) see the globalisation phenomenon as characterized by an unfettered capitalism which results in constraints upon democracy, limiting governments' capacity to act in ways other than those determined by the free market. In this context schooling becomes simply an economic good with a school curriculum determined by largely commercial and utilitarian considerations. This expression of human capital theory is summarized in Barro's (1997) cross country empirical study of the determinants of economic growth, where the author shows a strong correlation between economic growth and the highest level of education in the country. In the light of such studies the involvement of business and commerce has been greatly enhanced, indeed the World Bank in the late 1990s dubbed itself the Knowledge Bank and established its Knowledge for Development Program (K4D) to measure the progress of nation states towards becoming 'knowledge-based economies' (KBE). The World Bank, comprising of 186 nation states, all of which are also members of the twin organization the IMF, is now the biggest external loan provider for education programmes. These programmes account for about one quarter of all external funding of education and promote the

organisations' policies across a significant number of borrowing states – almost 100 in number (Moutsios 2010). However, despite having a motto of “our dream is a world free of poverty” , a sentiment that evokes an aspirational mandate based on human rights (Menashy 2012), since the 1960s its educational policies have been largely justified by market theory and an understanding of the value of education in terms of its capacity to increase individuals' productivity as economic units (Robeyns 2006)

As a consequence, the “globally structured agenda for education” is now indistinguishable from that of a neoliberal consensus which holds sway in the countries of the Global North. In the light of Drucker's (1994) observation that “education will become the center of a knowledge society and schooling a key institution” the impetus for education reform has become stronger. This commodification of knowledge i.e. the treatment of knowledge as if were a commodity of the same order as any other good or service, contains inherent contradictions, since there is an implicit assertion of intellectual property rights whilst at the same time the knowledge society is fostering productivity on the basis of open communication and universal connectivity (Ball 2007). The emergence of a Schumpeterian ‘competition state’ (1943) holds as its central concern that there will be “innovation, competitiveness and entrepreneurship tied to long waves of growth and more recent pressures on perpetual innovation” (Jessop 2002). The model of education that derives from this interpretation is one that is seen as a means for developing human capital for the purposes of national economic growth, as opposed to the intellectual enrichment of the students. Indeed national competitiveness has become a central preoccupation for policy makers and this has dictated their governance strategies (Watson and Hay 2003). These national preoccupations are manifest in the policies and practices of the World Bank, the IMF and the OECD (Robertson and Dale 2009). It is argued that the projects which these powerful SNO promote across the world for the most part share a common market-driven agenda, which impacts significantly upon education policy and practice (Menashy 2012).

Globalisation in the networked society

Castells asserts that the global city is not a place but a process (1997). A process by which centres of production and consumption of advanced services are connected via a global network where the global information flows serve to downplay the importance of the immediate locale. According to Castells the information age is ushering in a new urban form of ‘informational city’” In this new society, which is based upon knowledge, the organization takes place around networks through which information flows. Castells envisions a situation where high technology manufacturing is organized around two

groups that do not necessarily have any geographical proximity to one another. One would be a highly skilled R&D facility and workforce in core industrial high-tech area, the other would be a large assembly facility with semi-skilled workers which could well be located on another continent but which was linked to the innovation centre via global informational networks. Castells calls these “milieux of innovation”. Castells states that the information society came into existence around the late 1960s and 1970s as a result of the simultaneous availability of new, flexible information technologies and a set of historical events, and the subsequent erosion of the Keynesian consensus which had pertained in the decades after the Second World War. These social and economic circumstances came together so that, through many processes interacting with each other, information networks became favoured as the most efficient form of organization. Once introduced, and powered by information technology, information networks, through competition, gradually eliminated, as Castells argues, other organizational forms, rooted in a different social traditions and ideologies, ones that were less determined by the power of the markets. This argument can be further developed, by citing the privatization of telecommunications coupled with the constant facilitation of global investment in and expansion of information technology and communication networks. This is further evidence of the ideological and financial redirection of international organisations to work with nation states to become “capitalism’s collaborators” (Retort 2005).

Appadurai (1996) characterises globalisation in the form of different “scapes” or “flows” namely the ethnoscape, the technoscape, the financescape, the mediascape, and the ideoscape. Taking “scape” as the common root of these words “indicates that these are not objectively given relations that look the same from every angle of vision but, rather, that they are deeply perspectival constructs, inflected by the historical, linguistic, and political situatedness of different sorts of actors: nation-states, multinationals, diasporic communities, as well as subnational groupings and movements” (Appadurai *ibid*: 589). This underlining of the perspectival construction of globalization flows recognises the differences in the globalizations experienced by different nations.

John Urry (1999) uses both Castells’ networks and Appadurai’s scapes and flows in his formulation of the technological society in the information age. He defines scapes as the networks of machines, technologies, organisations texts and actors that make up several interconnected nodes along which flows can be relayed. Once the scapes have become established then individuals and, especially, corporations will try to become connected through nodes within a particular network to form their own hubs. Between these nodes and within the hubs a great deal of information flows, this information

should be seen as a commodity, and therefore having a market value. Such information may be financial, economic, and scientific or 'news', all of which is of great value to those who are part of the groups and are 'well plugged in' whilst those who are not will be effectively excluded. The location of the nodes and the hubs has little to do with national boundaries or jurisdictions and they, therefore, can often represent stateless entities not bound by the laws or regulations of any nation state. In this way they transcend Weber's (1947) classical analyses of modern bureaucracies which are "rational-legal" authorities characterized by hierarchy, impersonality, continuity and expertise. These unaccountable products of the interconnectedness of global capital have increased enormously in power in recent decades (Beck 2005): out of 166 entities (countries and companies) with GDP or sales of more than \$50 billion in 2008, only 60 were countries whilst 106 were companies (Rothkopf 2008).

Such is the strength of the neoliberal arguments that much recent literature presents neoliberal globalization not as a theory but as an objective set of social processes with an associated historical inevitability (Rizvi and Lingard 2010). Smith (2000) argues that this sort of economic determinism privileges the economic over political and social processes. Nonetheless there are strong arguments that point to neoliberal globalization leading not only to a diminution in the economic power of nation states, but also to a transformation in the intellectual independence of supranational organisations (SNO). Marginson (1999) suggests that nation states are now merely junior partners to large multinational companies, whose particular politico-economic agenda is advanced through pro-capitalist manoeuvres such as global trade agreements. Ritzvi and Lingard (2006) contend that the OECD which was traditionally a site for the free exchange of educational ideas has now become a policy player in its own right advocating policies on deregulation and privatization based squarely on ideological beliefs about the role of the state, free trade and individual enterprise. Equally UNESCO, which once promoted a cultural perspective free from economic overtones has increasingly begun to promote a neoliberal narrative about education based on skills and employability (Robertson, Novelli et al. 2007). Several commentators (Leye 2007) have argued that the 'ICT for Development' discourse adopted by the SNO, such as UNESCO, disguises nothing other than the latest phase in advancing the interests of the countries of the Global North at the expense of less developed economies, not least by failing to acknowledge any viable alternative arguments.

Anthony Kelly (2009) takes the argument further, in suggesting that SNO, such as the World Bank support the idea of the commercial sector taking the lead in education in

developing countries so that schools become demand, rather than supply-led. This leads, he argues, to the development of schools based on consumer choice and perceived immediate economic needs – this model is founded upon the education-as-human-capital-formation argument, rather than on policies which reflect the wider needs of particular societies.

Globalisation in the Arab world

The creation of national boundaries within the Arab world is a phenomenon which arose only in the Twentieth Century – the Ummah or single divine community is an Islamic principle which has existed since the days of the Prophet Mohammed. In the early Fourteenth Century the explorer Ibn Batuta spent 30 years traversing the regions of north Africa, parts of the Middle East, Central and South East Asia travelling to all parts of the Dar al-Islam, or the “abode of Islam” as it was known, without the hindrance or even the need to consider national boundaries (Mackintosh-Smith 2003) ; this was the region of the world where Muslim rules and Islamic law prevailed. But, although there was a great geographical diversity over the 100,000 Km odyssey which took him to all parts of the Arabic-speaking world and beyond, amongst the Islamic peoples populating the area, there was a shared and unified belief system and their spiritual moral and social values were universal (Aslan 2006). The historian Marshall Hodgson (1993) has referred to this time as the golden age of Islam which “came closer than any other medieval society to establishing a common world order of social and even cultural standards”.

The globalisation evident in the contemporary world, however, is a far from a unifying phenomenon in the Arab world. Najjar (2005) speaks of there being, typically, three types of Arab response to globalization – firstly, those who reject it as the highest form of cultural imperialism which serves to undermine their local traditions and cultures; secondly, those, mainly secular individuals, who welcome globalization as force for modernisation which brings the age of modern science, advanced telecommunication and freedom of choice to their conservative homelands; thirdly, those who believe, pragmatically, that it is possible to find a form of globalisation which is compatible with local cultures and beliefs.

At a policy level, the ruling families who govern the Arabian Gulf states identify most strongly, at least publicly, with the first group. The Qur’an (3:111) tells Muslims that they are “the best people evolved for mankind”, and any attempts at drawing lines dividing the world of belief and devotion from the day to day practices of everyday living are seen as a dangerous heresy. The manifestation of this deeply traditional view

is most in evidence in the Gulf states, where the influences of the Islamic Salafist Sunni interpretations of the Qur'an from Saudi Arabia are strongest. In the countries of the Levant, such as Jordan, particularly in the large urban centres of Amman and Irbid, a more pragmatic approach to the Islamic faith is evident, though more tribal, traditional values are in evident in the southern parts of Jordan around Wadi Rum and Aqaba. The strictest interpretations of Islam have a profound impact upon the development of the Knowledge Economy, since, as Ahmad al-Rahman has asserted (1999) "Globalisation is equated with secularisation, which means the separation of religion and life, replacing Islam with a pragmatic and materialistic European and American thought" . Human rights, freedom and democracy are seen as rationalisations of the power and interests of Western nations, and of America, in particular.

A vocal minority of, largely secular, intellectuals exists however, and these commentators are critical of the authoritarianism of the Islamist discourse that underpins many of the Arab-Muslim regimes. They argue that globalisation has become the "discourse of the age" (Zakarria 2004) and they are concerned primarily not to defend globalisation in all its manifestations, but to defend the 'sound thinking'. Tarabishi (2000) is concerned that an Arab rejection of globalisation may crystallise into a rejection of modernity all together. Hamad (1999) contends that it is naïve and superficial for Arabs and Muslims to believe that they can adopt "Western technology but not Western values". These arguments and contentions are, nonetheless, not universally held, especially in the states of the lower Gulf, since they implicitly challenge the very Islamic foundation of these countries. The basis for the modernist interpretation of the human condition draw upon many of the foundational principles of the European Enlightenment such as democracy, freedom of association and of thought, and equality of opportunity (Latour (1993). These very principles are not widely supported in the Arab Gulf states, since they are said to challenge Qur'anic teaching.

Notwithstanding the lack of reconciliation between the liberal-progressive and the conservative strands of political and social thinking and policy making, there is evidence of a *realpolitik* emerging in the actions and the policies of the rulers of the essentially non-democratic regimes of the Gulf states. At the beginning of the Twenty – First Century the Gulf Arab States, collectively aligned within the Gulf Co-operation Council (GCC), were emerging as significant players on the world stage. The GCC exists to promote the economic and political interests of its six member states, of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE), who share a common heritage, economies based upon oil exportation and social

organisation based on tradition and kinship (Abdulkhaleq 2010).

Bahrain and the GCC countries

With its population of just over one million, and situated on a tiny landmass, Bahrain, is a relatively small player within the context of the GCC, but its relatively relaxed social codes and its active courting of trans-national businesses have made it, along with nearby Dubai, in the UAE, something of a harbinger for change and globalisation in the Gulf region. The American McKinsey consultancy has been active, for example, in promoting Bahrain as a favourable destination for international capital. This kind of proactive embrace of the international business world has led some observers to claim that “While the outside world has portrayed the Arab world as downtrodden in time, a vigorous entrepreneurial leadership has developed in the Gulf area. In places like Dubai, Abu Dhabi and Doha, Arabness is chic and not backward” (Fox, Mourtada-Sabbah et al. 2006:49). Since the 1990s globalisation has created a rift in what was considered a unified Islamic worldview and the related concept of pan-Arab supra-nationalism. The increasing penetration of global ideas, business practices and commodities catalysed fundamentalist and anti-globalist political action groups but, at the same time, a growing population of consumers has been created which is highly receptive and now enjoys the material benefits of globalism (ibid :31). Leaders and policy makers have had to reconcile these two conflicting positions – of a pervasive consumer culture living alongside traditional Islamic values.

2.3 The Knowledge Economy

The knowledge economy emerged as a policy concept within the global education policy field in the 1990s. Alongside it were the variously-described-concepts of the knowledge society and the learning society (Kenway, Bullen et al. 2006) and these have represented a significant driving force for the policy reforms which are the focus of this study. As outlined in the introduction to this chapter, it is Peters’ assertion that there are three interconnected aspects of the knowledge economy: - learning, creativity and openness, and these provide a series of interweaving themes that emerge throughout this narrative. Peters’ construction of a knowledge economy which has these three parts, represents something of an echo of the tripartite division of knowledge forms or ‘knowledge of constituent interests’ described by Habermas (1984). Habermas spoke of instrumental, practical and emancipatory knowledge. Instrumental knowledge corresponding to technical human interests related to work,

labour and production; practical knowledge refers to interpretation of day to day activities so that they are co-ordinated and given meaning; emancipatory knowledge is that which is articulated in terms of power, control and freedom-seeking. As will be evident in this section, instrumental and practical knowledge are the forms in which the knowledge economy are most in evidence in the policies and practices of the governments and SNO, and are of most interest to policy-makers and their advisors in the Middle East. The fledgling democracies in this region have some difficulty accommodating any actual manifestations of creativity and openness i.e. 'emancipatory knowledge', given their centuries of colonial domination and inherited traditions of authoritarianism (Rogan 2009)

From a neo-liberal perspective, the knowledge economy can be seen as the pinnacle of the Modernist Project (Flint and Roca 2012). This project that saw its glimmerings in the European Reformation, was expanded and developed in coffee houses of Europe in the Eighteenth century (Calhoun 1992) and gained its full expression during the industrial revolution and the age of empire. The seismic shocks of the two World Wars of the Twentieth century (Taylor 1966) marked the beginning of the post-industrial phase as empires retreated and the economies of the developing world in the East (or Global South) took up the mantle of manual labour, where value is added to raw materials through bodily toil and the sweated brow of the workers. A knowledge economy emerged as the developed economies of the Global North believed, and developed policies to bolster that belief, that their future prosperity lay in the economy of ideas, enterprise and invention. Between the economies of the ideas-driven West and the manual toil of the East has lain that post-imperial construction - The Middle East - a group of nations whose definition was as a middle ground between the seats of empire in Europe and the colonies on the Indian sub-continent and beyond. It is here, in this region, that the seeds of a knowledge economy have been planted, at least in part, through the offices of USAID. In a very real sense, it is in the Middle East that a theoretical position associated with a knowledge economy can be tested – is it possible to have the development of a knowledge economy without the necessary precursor of an industrial past ?

It has become a feature of the post-modern condition that, with the decline in manufacturing industries in the Global North, the attention of policy makers has turned to the development of 'knowledge workers'. Though Brown and Lauder have highlighted (2006) that, in fact, an economic focus on this sector benefits only a very small segment of well-educated workers and there is very little significant advantage

accrued to the wider economy. Nonetheless, a particular development has been the transformation of the traditional view of education and schooling for young people into a process widely known as 'lifelong learning' - an activity in which a whole society is expected to partake, so as to create a learning society (Coffield 2000). This learning will not just happen in traditional 'places of learning', such as schools and colleges, but in many places, including cyberspace, as a part of a lifelong process. Coffield's report (ibid), which is a synthesis of an ESRC research project, highlights the political engagement with learning and, indeed, lifelong learning; but it is not something that has been greeted by the working population with unalloyed enthusiasm. In the UK, for example, many public sector workers (ibid Page 11) see the prospect "compulsory study for life" as being something of a tyranny, as they have yet another responsibility to uphold in order to maintain their employability and juggle this with the other demands of the working family and home life.

Creativity, within a knowledge economy, is not just something inspired artists do in their creative spaces such as studios, workshops and theatres, but it is something which relates more widely to, for example, patented inventions, new pharmaceutical products and saleable financial instruments. Finally openness becomes a code word for the spreading of neoliberal democratic ideas which underpin the foundations of an open knowledge society, such as, for example, George Soros' Open Society Institute. A neoliberal interpretation of the knowledge economy, therefore, can be seen as a convenient confluence of education, technology and globalisation. Furthermore, the conception of 'knowledge' as a commodity (Lyotard 1984) implies that it can be traded as are other commodities. Yet as Susan Robertson (2009) has pointed out, if we "scratch the surface it will be clear to most of us that knowledge has always been central to our labour, and therefore the economy". She points out that the battle between the steel workers and the great reformer and labour theorist Frederick Winslow Taylor (1856-1915) centred upon a dispute over what would now be known as intellectual property, namely the appropriation of the workers' key craft skills by the managers.

Early endeavours, made by members of the Austrian school of economics (Hayek 1944), to define the relationship between economics and knowledge, were further developed in the USA by Fritz Machlup (1962) and Peter Drucker (1969). Drucker referred to the application of knowledge from any field or source as a spur for economic development. However, from the mid-1950s onwards a widespread consensus was emerging amongst many writers in the advanced industrial societies that the rapid economic and technological changes taking place at that time were

leading to a world in which national wealth and prosperity would no longer be provided simply by the continued development of basic heavy industries and mass market manufacturing but that 'knowledge' rather than land, labour and capital was the most important factor in production (Guile 2010). A dissenting voice from the predominantly monetarist Austrian school was Schumpeter (1943), his arguments formulated the theory of "creative destruction" where it is, he claims, ideas and innovation rather than capital which drive a modern economy forward. According to Schumpeter, to be successful, entrepreneurs must innovate and create new products and working practices, so that innovation becomes the major driving force, with innovation competition taking the place of price competition as the driving and coordinating mechanism.

The social theorist Daniel Bell (1973) coined the term "intellectual property", when he promoted the idea that theoretical knowledge is the most important form of knowledge in the economy. He saw that theoretical knowledge would be the key determinant of economic success; he warned that knowledge-based services would be transformed into the central structure of the new economy and of an information-led society, where ideologies would end up being superfluous. It is this position which underpins the current global concern for promoting science, technology, engineering and mathematics in school curricula throughout the world (Guile 2010). Bell maintained that theoretical knowledge constitutes the 'axial principle' of innovation and growth in the advanced economies of the Global North.

The policies of SNO, such as the World Bank and the OECD, have been based upon the ideas about the commoditisation of knowledge and their arguments have come to reflect these beliefs. The 1998 World Development Report (WDR), Knowledge for Development (K4D), placed knowledge at the centre of its activities. Yet, as Jones has observed (Selwyn 2012) the World Bank has a much broader range of roles in shaping education policies as follows:-

- being instrumental in forging policies that see education as a precursor to modernisation;
- being a major purveyor of Western ideas about how education and the economy are, or should be, related;
- being an influential proponent of the rapid expansion of formal education systems around the world – in particular, financing much of that expansion.

The notion that knowledge, in this form, as a global public good has been further developed by Joseph Stiglitz (1999), former chief economist with the World Bank (WB); and subsequent WB reports e.g. Lifelong Learning for a Global Knowledge Economy (2003), have reinforced the organisation's perspective and their linkage of the knowledge economy to lifelong learning in the global context. The World Bank now has a series of indices which are published on a website through which it reports on countries' knowledge economy development, and these are based upon four pillars as follows:-

- 1) An economic and institutional regime that provides incentives for the efficient use of existing and new knowledge and the flourishing of entrepreneurship;
- 2) An educated and skilled population that can create, share, and use knowledge well;
- 3) An efficient innovation system of firms, research centres, universities, think-tanks consultants, and other organisations which can tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology;
- 4) Information and Communication Technologies that can facilitate effective communication, dissemination, and processing of information.

This regime privileges a particular set of 'knowledge's', notably: Western science and technology enabled by educational technologies (whose intellectual property rights resides in the West) and institutional structures which favour the development of liberal market economies – these priorities bear a strong resemblance to a post-Washington Consensus, and , as King has argued (2002), this has meant that for the World Bank, business has been pretty much as usual, despite the significant changes in the world economic order brought about by a burgeoning of several different and parallel knowledge economies. The OECD too has a set of guiding principles built upon four main pillars upon which form the basis of their knowledge economy arguments. These four are:

- Innovation;
- Human capital;
- Enterprise dynamics; and
- New technologies.

It will be noted that there is an almost precise concordance between these four pillars from these two leading world SNO, though the OECD version is slightly nuanced in its definitions, and as such reflects a more Europeanised interpretation of the neoliberal

agenda. Most importantly there is a reference towards a 'Learning Economy', a concept coined and championed by Bengt-Ake Lundvall from Aalborg University (1996). Lundvall argues for a learning economy, which he claims is quite distinct from a knowledge economy. He sees, within the learning economy, a central importance for innovation and creativity. In making his argument he is critical of the way in which theoretical knowledge usually has primacy in most knowledge economy discourses (ibid) and that he believes that tacit knowledge is the most important. In making this argument he draws upon the philosophical works of Polyani (1958) who stressed that, as well as the knowledge itself, it is the *relationship* between theoretical and tacit knowledge that is being the most important consideration. Many futurologists, such as Drucker (1969), Cairncross (1997), and Leadbetter (1998), whose conceptions have influenced the thinking of policy makers and commentators in the opening years of the Twenty-First Century, stress the importance's of higher learning, metacognition and new forms of knowledge to create a new cadre of 'knowledge workers'; for example Hargreaves (2000) speaks of "knowledge management" as playing a vital role in the creation of the "learning society". Yet Guile (2010) argues that since most governments' policy formulations focus predominantly upon theoretical knowledge to the exclusion of a wider definition of *knowledge* itself, and the new and developing role of knowledge in economic development, they fail to fully grasp the learning challenge of the knowledge economy in its totality. In justifying this Guile points to the emphasis, within many curriculum reconstructions throughout the world, of the STEM subjects (science, technology, engineering and mathematics) to the exclusion of other intrinsically more creative curriculum areas, most notably the arts subjects.

The learning economy

In the learning economy, according to the policy statements of the OECD (1996) there is an emphasis upon the importance of skills and learning and it focuses upon the need of lifelong learning as a central component in a high-skills, high-wage jobs strategy. Lorenz and Lundvall (2006) see the learning economy as a set of interlocking forces, including information and knowledge production, distributed social media, computer networking and improved connectivity each contributing towards a mode of social production which strongly emphasizes the learning processes. Lundvall distinguishes between information and knowledge; the former is logical, sequential and easily broken down into bits and transmitted by computer whereas the latter is associated with learning that is often a form of know-how and competencies based on tacit knowledge. He describes the learning economy in terms of interlocking forces or ecologies of information and knowledge, generated by increased collaboration through computer

networking and the development of social media as producing a heightened form of human capital formation. The learning economy is quite different, he argues, from a knowledge or information economy since it is not based upon formal knowledge institutions or propositional knowledge, rather it is a form of experiential knowledge formation, where there is learning-by-doing, and learning-by-using. This learning economy can be seen to be contributing towards the production of new knowledge. These theories resonate with those of John Dewey (1944) and the importance he stressed upon learning by doing. At the time when he was writing, Dewey did not intend to imply a move for education to become more vocational and reductive, on the contrary he advocated the creation of new knowledge on the basis of the existing corpus being fused in the mind of the learner with their practical application of that knowledge in settings which are meaningful to them. Unlike traditional schooling, which is isolated from society and where the learning is organised along traditional academic disciplines, Lundvall et al. (2006) argue that a learning economy should focus on collaboration and interdisciplinary activities taking real-life problems in order to produce the flexible workers for a rapidly changing economic environment. As well as the early theorists and advocates of experiential learning, Lundvall's work is also influenced by Pasinetti (1981) who distinguishes between *producer learning*, which is linked to productivity and growth, and *consumer learning* in which consumers learn how better to consume goods and services but this learning does not add to the economic output.

Lundvall has been highly influential in the formulation of OECD economic policy, particularly in respect of the knowledge economy, but his formulations and characterisations of learning have been from the position of an economist rather than from an educational or sociological perspective. As such, his work has not linked with the considerable literature in sociology and in education on learning theory. His theories can, therefore, be interpreted both as advocating greater vocationalism in schools to encourage the development of the skills for lifelong learning and, by contrast, more student-centred experiential learning in the classroom. Witnessing the declining importance of the arts in schools, from a policy perspective, it is evident that policy makers in most parts of the world have chosen the former construction and have modified school curricula to increasingly emphasise work-related learning. The paradoxical effect of this has been often to restrict opportunities for creativity in the classroom (Sahlberg 2010). It is of interest to take note of the ways in which progressive learner-centric educational ideas have become manifest in the policies of the SNO in general, and the World Bank in particular. Lifelong learning becomes a vehicle for promoting a utopia of techno-centric, vocationally oriented activity where the role of an expert teacher is greatly diminished.

The creative economy

Historically, a great deal of cultural value has been placed on the importance of creativity in the arts, the sciences, and the political economy (Batey and Furnham 2006). Some researchers have claimed that creativity constitutes humankind's greatest resource (Toynbee 1964). The notion, however, of the creative genius as an inspired individual is a peculiarly Western one (Lubart 1999). The philosophies of the Eastern world, especially Islam, have underplayed the notion of a creativity and originality that springs from individuals (Al-Jabri 2006). In these more collectivist societies, where individual enterprise placed within the context of the whole society, personal acts of creation are seen as revelations of the pre-existing wisdom of the Almighty. The collective societal anxiety of the risks of the creative process are evident in the school curricula in the Middle East in which the creative subjects, such as art, music, drama and poetry, have only a limited expression in all but the early primary years of education.

Yet creativity and innovation are seen as key drivers for the globalised knowledge economy. Richard Florida's *The Rise of the Creative Class* (2002) has been a popular and influential book containing a bowdlerised Schumpeterian account. It provides a compelling narrative which has fitted very neatly into the post-cold war American world view, which has seen the forces reshaping the economy being driven by a need to constantly innovate in order to survive in a competitive and uncertain world. The argument identifies, the 40 million American who are the new 'creative class' who create for a living in industrial fields as diverse as engineering, theatre, education, biotechnology, pharmaceuticals and software generation. These creative industries are not new, but in a post-industrial society, they take on a new and enhanced significance. The post-modern emphasis is upon invention and ideas rather than in the production of tangible goods. There is a transition away from industrial production towards the generation and management of intellectual property (Landry 2000, Howkins 2001, Florida 2002, Cox 2005, Leadbetter 2010).

The creative economy, ostensibly, has a strong appeal amongst policy makers since they see this as a means through which new methods can be used to improve student learning in, for example, mathematics and literacy, and how different notions of intelligence and creativity can inform educational practice. The paradox here is that in most education reforms there is a 'creative destruction' taking place at the heart of the curriculum (Bullen, Robb et al. 2004) as reform projects across the world concentrate on the development of STEM subjects (science, technology, engineering and

mathematics) in such a way that squeezes out the artistic and creative elements in the curriculum. Whilst STEM subjects can be approached in an open-ended creative way, there is also a great deal of factual information and theory to be absorbed, which tends to mitigate against a more inductive student-centred approach to learning. Moreover, although several authors (Gardner, Claxton et al. 2007) over the past twenty years have sought to stress the importance of expressive and performing arts and the significance of aesthetics and design as essential components underpinning a knowledge economy, the often high-level rhetoric about creating a curriculum which is designed to accommodate learners' needs and to promote the skills deemed essential for Twenty-First Century learning and living, the opportunities for creativity which spark the light of inductive reasoning in the minds of learners are seldom witnessed (Ridge 2011). Hard-pressed teachers with over-loaded content-heavy curricula, in the main, concentrate on the reinforcement of theory rather than encouraging a form of learning that is not dependent upon rote, remembering, recitation and regurgitation.

Moreover, many of the objectives implicit in the policy formulations about promoting the knowledge economy in schools through better use of educational technology, such as collaboration, information-seeking and problem solving are seldom realised in practice. As Peters (2010:73) remarks "There is still a long way to go in theorising and developing policies that encourage creativity in schools predicated on new forms of social media and knowledge ecologies" . Peters sees these knowledge ecologies as democratising access to knowledge and decentralising organisational structures. Through encouraging greater personalisation and autonomy there is the creation of a new form of 'collective intelligence' based upon collaboration, participation and peer learning. By contrast Brown, Lauder et al (2008) speak of "digital Taylorism", where systems and processes in the service industries are simplified to enable lesser-educated workers to operate collectively to perform complex tasks thus reducing the need for highly skilled and educated knowledge workers and only a small proportion of the workers are given the "permission to think" in order to move the business forward.

The open knowledge economy

Referred to generally, and often interchangeably, as the open knowledge economy, the open society or the open knowledge society, this aspect of the 'umbrella of knowledge economies' (Teece and Nonaka 2001) represents the one which is most politically charged, particularly in respect of the countries within the Middle East. The openness is referring not only to open government and democracy, but also the openness of communication that takes place across national boundaries, often with ill-defined jurisdictional boundaries, as with social networking internet sites. These aspects of the

open knowledge economy are particularly relevant to the citizens of the countries in the Middle East in the second decade of the Twenty-First Century as they were for the collective social movements of the citizens in Eastern Europe in the penultimate decade of the Twentieth Century (Garton-Ash 1990). It is helpful, in the context of the theoretical frames adopted for this thesis, to view these phenomena in terms of Appadurai's 'scapes', in this case 'mediascapes' and 'ideoscapes' (1996) – these are ways of representing the intersecting global mobilities as 'disjunctive scapes' of the global cultural economy. Appadurai describes mediascapes as entities that “refer both to the distribution of the electronic capabilities to produce and disseminate information (ibid:35), and ideoscapes as “chains of ideas often directly political and frequently have to do with the ideologies of states and the counter-ideologies of movements” (ibid:36). These scapes are “inflected.....by the historical, linguistic and political situatedness of different sorts of actors, nation-states, multinationals and diasporic communities” (ibid:33). Kenway (2011) has created an additional scape – namely an emoscape, which refers to an emotional landscape which is not just located in people or in territorial space, but which moves through space since and is “communicable, transmittable and infectious, even viral.” Kenway points to the phenomenon of videos which ‘go viral’ via YouTube, and the flow of ideas and emotions through the ‘Twittersphere’.

During the various civil uprisings which took across many countries in North Africa and the Middle East, in the spring of 2011, known collectively as the Arab Spring, many commentators have highlighted the importance of internet social networking sites and mobile telephony in helping to create and sustain the groundswell of popular discontent which was eventually so successful in achieving the overthrow of several autocratic regimes. Here the emoscape, the ideoscape and the mediascapes combined to provide a means for the circulation of ideas and emotions which led to a social change which was unprecedented in the region. Emma Murphy (2009) presaged the ‘Arab Spring’ by comparing the growing importance of cyberspace and personal networking in the Middle East, and the ferment of new ideas produced during this time of great social upheaval, with the development of the “public sphere” in the coffee houses of Europe in the Eighteenth Century (Habermas 1984), the difference being that in the case of the countries of the Middle East, the public sphere has existed online in social media networks. Habermas has expressed some scepticism about the value of the Net in creating the correct conditions for democratic deliberative practices to take place, due to its unregulated nature; but, as Dahlgren (2009) has observed, digital technology helps societies to move beyond the narrow definitions of the “public sphere” by connecting citizens to “civic cultures in subtle, unintended and surprising ways”

(2009:48). Dahlgren argues that, through the Net it is possible to develop new forms of mediated political participation. The analogy with the Habermasian coffee houses is not a precise one, but it is useful to illustrate how, in the correct circumstances, civic cultures can develop amongst autonomous, well-educated individuals in ways that are unmediated by governments. Habermas (1989) himself recognised that the phenomenon, which he had described, was a bourgeois construct which grew out of the increasing autonomy of the professional classes who – through being “capitalist achievers” had managed to free themselves from both the state and the religious powers. This very autonomy led to the eventual aggrandisement of capitalism, which, through its advancement, eventually, in the st Century, has made states subservient, and, consequently, the public sphere has no longer needed to adopt an agitational or oppositional role. During the period of social change taking place in the Middle East from early 2011, this agitational role has been assumed via the Net through the creation of new ‘civic cultures’. In this situation the cyber-public-sphere has provided a space where the oppositional voices of dissenting people can interact. Nonetheless, the motives of the dissidents, the disparate nature of their aspirations, and their lack of economic empowerment have meant, in most cases, that the forces of conservatism, have successfully outmanoeuvred the more radical ambitions of the Arabic would-be social reformers (Springborg 2011).

The rulers of the Arab states within MENA find themselves in a difficult position in this regard: they are keen to promote and develop their knowledge economies, as noted in Chapter 1, but they find it hard to reconcile this new freedom of ideas and openness with a form of government which, at best, could be described as a form of constitutional monarchy, but which, in many ways is conservative, traditional, tribal, patriarchal and authoritarian. These rulers are very reluctant to embrace the concept of genuine democracy, for fear of succumbing to a wave of anti-modernist Islamic fundamentalism similar to the one which swept away the rulers of Iran in 1979 (Afray and Anderson 2005). For example, the ruler of the Gulf emirate of Dubai, Sheikh Mohammed bin Rashid Al Maktoum, who himself claims to represent a key figure in the reconciliation of modern knowledge-based economies and the traditional Islamic ways has created a large endowment of \$10 billion to fund “knowledge projects in both Arab and Islamic worlds”. At the Dubai Knowledge Conference (Maktoum 2007) which marked the launch of Mohammed bin Rashid Al Maktoum Foundation, the Sheikh outlined his personal of and commitment to a renaissance in the region, as follows:-

“Knowledge and freedom are two sides to the same coin building communities of knowledge requires the development of policies, laws and measures necessary to

ensure the freedom of thought, research, publication, in addition to providing protection for intellectuals, researchers, and inventors, while securing the independence of universities and research centers.” (Maktoum 2007)

Despite this rhetoric, any moves to create some sort of representative democracy in the UAE have been squashed by the regime. In April 2011, three pro-democracy activists were arrested and jailed for signing an on-line petition which advocated the creation of an elected parliament (BBC News 11 April 2011) and in 2012 an American pro-democracy NGO in the UAE was closed and its staff expelled (Reuters 2012)

Openness and freedom of expression have been central to much of the discourse about the knowledge economy (David and Foray 2003). An informed and educated citizenry has been seen as a pre-requisite for open and democratic government, and many governments, including several enthusiastic Gulf states, are increasingly promoting the notion of e-Government as a way of putting government services online and increasing their accessibility to the populace. Alongside these basic principles which have been growing in strength since the 1960s, the notion of freedom of information and a citizen's right to know are concepts which began in the USA and have grown and developed in Europe and in Australasia in the 1970s and 80s. Much of this demand and struggle found its way into legislation designed to enable, regulate and control public access to government records. These developments underline the ways in which information and knowledge have always been central to accounts of democracy (Peters 2010).

Mohammed Faour and Marwan Musher (2011), in their recent analysis of citizenship education in the Arab world, have stressed the importance of developing, amongst students, an understanding of their civic responsibilities as well as a recognition of individual rights and duties. This, they argue, could be achieved through schools and ministries of education developing new curricula which develop civic understanding amongst students.

2.4 Education Challenges in the Arab world and the impetus for change

This section identifies the shortcomings in the educational outcomes that policy makers have been seeking to address, and the pressures placed these upon these regimes to embark upon reforms that seek to meet the learning needs of young people in the Twenty-First Century. In an age of international education comparisons, there are

pressures to conform to a series of global expectations of what education should look like, and what its outcomes should be. In the Middle East, and the Gulf in particular, there has been education policy borrowing from both West and East (Aydarova 2012), though the highly popular Singaporean imported models of education organisation and teacher preparation owe more to the modernist project of the Global North than to any particular Confucian tradition. DiMaggio and Powell (1983) have described the process as one which leads to, and what they term as, institutional isomorphism; this is a process by which organisations and national institutions become transformed to reflect a series of standardised norms. They suggest three ways in which this growing together or isomorphism takes place. Either mimetic, through direct copying; normative, through an evolutionary process in the normal life cycles of institutions; or coercive, where external forces, for example, SNO or powerful centralised government bureaucracies endeavour to force the institutions to fit a new mould or to operate in a different way. In their “iron cage revisited”, Di Maggio and Powell describe social organisations, such as schools, in the latter part of the Twentieth Century locked into aspirational rule-based bureaucracies from which they cannot escape just as Weber (Weber 1952) described the emergence a rigid and rational social order emerging within the capitalist societies in the early years of the last century.

The education system in this region, whose traditional purpose had been to ensure social order and obedience through the transmission of a core set of beliefs based upon strict personal obligations and a strong moral purpose, has been expected, in recent years, to transform into one where human capital formation is its primary purpose, a phenomenon that Brown et al. refer to as the State Theory of Learning (2006). In this context, skills for employment and lifelong learning have become the new drivers. The next section provides an overview and a critique of the perceived problems in the education systems in the region.

Definitions of knowledge – contrasting epistemologies

An account of education reforms which is intent upon addressing the knowledge economy in the Arab context is inherently problematic not least in terms of definitions (Mazawi 2010). In the global discourses about the knowledge economy, several terms are used quite interchangeably, knowledge economy, knowledge society, open society, open knowledge society, learning society, information society (Kuhn 2007). In Chapter 1, the account of education development in the region indicated that from the late Eighteenth Century, at a time when the Age of Reason was well established amongst European Modernist thinking, debates abounded in Arab and Islamic societies about their position in relation to a Western version of Modernity. Whilst, regionally,

triggering calls for reforms, these debates also generated a good deal of resistance and opposition (Lubek 1998). Several different schools of thought competed - some reformist, some revivalist, but at least one, the Salafists is bounded by a deeply conservative tradition and theocratic certitude. Contemporary Arab thought is, still caught within a tension that makes it difficult to articulate the role of power and knowledge in transforming Arab societies. On the one hand is an anti-modernist Islamism which reifies knowledge of the past and projects it upon the present; on the other is a liberal Westernised model which, whilst not completely rejecting the past, acknowledges a primacy in the Western liberal model in bringing about self-realisation, equality of opportunity and modernisation (Ali 2005). In the view of Al-Jabri (2006), however, both traditional Islamism and liberal modernism are not authentic expressions of 'Arab reason'; nor do they empower the Arab individual to pursue an emancipatory and transformative pathway. The situation is more complex as local communities, parents and students "struggle for recognition, accommodation and validation of their symbolic representations and world outlooks in institutions" (Davies and Guppy 1997).

The shock of the new

The state education that was implemented between the 1920s to the 1970s, from the late colonial era to the early days of independence, sought to create a uniformity of provision in the form of a state-controlled school system. This represented a significant paradigm shift over what had taken place previously. This development did not simply represent a process of modernisation, structural change or transition, it reflected a shift in the power bases of education, with new sources of authority (political and social) and a revised series of definitions of what represented valid knowledge. The pre-existing educational establishment which were associated with mosques, the kuttabs and madrasahs, were either marginalised or absorbed into the state apparatus and ideology (Mazawi 2002).

As Michael Apple (1996) has observed, in relation to educational policy implementation, that beyond their ideological premises and presumptions, the local enactment of policy is deeply embedded in a society's socio-economic structure and political conflicts; and as Appadurai has stressed (1996) "contexts are produced in the complex imbrication of discursive and non-discursive practices, with each context implying a global network of contexts". Far from being simply exercises of modernisation or of nation building through schooling, the reforms that began prior to independence from colonial rule were, and continue to be, complex and multi-faceted. The reforms play a constant role in the reformulation and transformation of socio-

political power, since the changes in education policy and practice are usually implemented in the context of much wider reform programmes. In *Putting Islam to Work* Starrett (1998) asserts that this process generates interpretations of tradition and culture which enable competing groups to differentially frame educational values and schooling. Nonetheless, commentators have observed a common feature of local resistance to change in the revival of fundamentalism in its myriad forms, representing an opposition to what is perceived as a largely commercial culture of Western origin which threatens to overwhelm local cultural mores (Davies and Guppy 1997). This study, then, must acknowledge that the narrative about education reform has as much to do with meaning, relevance and personal identity in a rapidly changing world as it has to do simply with modernisation. Whilst established elites endeavour to consolidate their positions through the subordination of state schooling, and since school systems serve to mediate social processes in a populace, this very populace may be resistant to innovative policy formation, the success of which is dependent upon the assent of different social groups in the population (Ramirez and Boli 1987).

Ambivalence towards technologies of learning

A tension can be seen to exist between education and technology. Moral panic has, often, arisen when traditional systems of cultural transmission are overturned and new proposals threaten to undermine generations-old certitudes. In the classical world, Plato, writing in *Phaedra*, reports on Socrates' assertion that Homer saw the onset of the technology of writing as a threat to people's mental development and their capacity to remember (Markus and Benjamin 1997). As the archetype of the oral tradition where the great epic narratives of the *Iliad* and the *Odyssey* were recited and memorised Homer foresaw the diminishing of the human mind if these great works could simply be accessed through reading. Nonetheless, technology, for many, has often gone hand in hand with educational emancipation and freedom of expression. Gutenberg's invention of the movable type printing press in 1450 (McLuhan 1962) was said to have been a major factor in the European Reformation as print lay at the very heart of religious authority. Yet, in the Muslim world, it was only late in the Nineteenth Century that printing became widespread (Robinson 1993). The literal meaning of word "Qur'an", the Muslim sacred text, is "recitation". Through being recited, the very act of reading out loud, and being received aurally is part of the realisation of its divine character. Muslims strive to learn the Qur'an by heart and great scholarship is placed upon Qur'anic memorisation. Learning the Qur'an by heart and then reciting it aloud has traditionally been the first task of young Muslim boys and girls, followed by a Bismillah ceremony which celebrates the first words a child has learned.

It is known that the Prophet Mohammed was not literate, he is said to have received the divine messages from God and transmitted them orally, only later did his followers transcribe his revelations, yet, even so, and through successive generations, the primary mode of religious transmission has been oral. When in the 1920s the Egyptian standard edition of the Qur'an was first produced, this was not derived from a study of the variant manuscript versions but through a study of the fourteen different oral traditions of recitation (Graham 1977). Robinson (1993) observed that the problem with printing was that it attacked the very heart of Islamic systems for the transmission of knowledge; it challenged what was understood to make knowledge trustworthy, what gave it value, what gave it authority. As with the Christian custodians of knowledge in the pre-Reformation monasteries, there was a great risk in the general populace being able to read printed texts and make their own interpretations independent of clerical guidance. The oral traditions of learning the Qur'an, to a very large extent have determined the manner in which other knowledge has been transmitted. As the celebrated Muslim historian Ibn Khuldoon declared in the Fourteenth Century "The Qur'an has become the basis of instruction, the foundation of all habits which may be acquired later on" (Dawood 1967:421)

In the light of this education tradition and the manner in which the colonial powers, from the Ottomans to the Europeans of the early Twentieth Century, have largely delegated the general education of the populace to the local communities, it is unsurprising to identify an education deficit in comparison to the 'Enlightened Occident'.

The education deficit and emerging concerns of the Global North

The formal disengagement of the colonial administrations in the region which had been taking place during the latter part of the Twentieth Century, reached its culmination with the independence of all the former European colonies in the Arabian Peninsula by the early 1970s. However, the colonial interests remained in the form of mission schools, and, in the case of Bahrain, some emergent interest in vocational education, under British colonial rule. Yet, as Sayed (2006) has observed, the interest in the region of American and supra-national organisations was galvanised by the Iranian Revolution of 1979 and then further reinforced by the Algerian crisis in 1991. The events of September 11, 2001 in New York and Washington DC provided a strong additional impetus for regional intervention. Consequently the US State Department worked to engineer several development packages for the MENA region as a reflection of their

desire to contain Islamic fundamentalism, which was perceived as being a major strategic threat to the West.

Successive governments from the former colonial powers have believed that the control of education is essential in containing the spread of fundamentalism and setting the local economies on a pathway which would lead to their playing a full part in a world economy more geared towards the trading of intellectual property – one of the essential components of a knowledge economy. There has been broad agreement amongst the policy makers in the US-dominated SNO and inter-governmental authorities that there exists a considerable deficit to be addressed in the MENA countries.

From a neoliberal construct, it is hardly surprising that the Arab world, with its wholly different educational heritage, can be seen to be somewhat tardy in its contribution towards a knowledge economy, the definition of which, is somewhat odds with its own epistemological traditions. There are several significant indicators in respect of the small contribution the Arab world currently makes towards the generation of new knowledge. The UNESCO World Science Report of 1998 reported on four indicative Knowledge Economy performance indicators as follows (Table 1, overleaf) – Expenditure on Research and Development; Scientific Publications, European Patents and US Patents. At that time, in respect of the entire key indicative areas combined, the Arab world, with a combined population of approaching 300 million was making a contribution less than that of sub-Saharan Africa.

In the 1998 report - *Education in the Middle East and North Africa – a strategy towards learning development* – The World Bank outlined the major challenge for education in the region:

“Countries in the Middle East and North Africa are increasingly integrated in world markets for manufactured goods. Their ability to compete in these markets and in globalizing service markets will depend on the quality of human capital they bring to the competition.” (1998:3)

Table 1: Scientific and Technological Capacities in World Regions – The percentage contribution of different world regions in respect of key KE indicators

	Expenditure on R&D	Scientific Publications	European Patents	US Patents
Arab States	0.4	0.7	0.0	0.0
North America	37.9	38.4	33.4	51.5
Western Europe	28.0	35.8	47.4	19.9
Latin America	1.9	1.6	0.2	0.2
Sub-Saharan Africa	0.5	0.8	0.2	0.1
Japan and NICs	18.6	10.1	16.6	27.3
China	4.9	1.6	0.1	0.2
India and Central Asia	2.2	2.1	0.0	0.0
Others	2.2	2.9	1.3	0.6
World	100	100	100	100

Source (UNESCO 1998)

The 1998 World Bank report (ibid) saw the role of education as to develop internationally competitive human capital, and thereby to extend social cohesion, and other aspects of social well-being; this is in marked contrast to a traditional Arabic view of the purposes of education. The policy statements have an inherent assumption that an education system which successfully develops human capital will, by virtue of this, extend social cohesion and social well-being. In a further reinforcement of the World Bank's findings and recommendations, the United Nations Development Program published a series of 'Arab Human Development Reports' in successive years from 2003-2006 (Mazawi 2010) The reports were controversial and uncompromising (Lord 2008) and they laid the ground for a series of reforms aimed at developing its citizens' knowledge and skills to be productive in the global economy. The reports sought to provide a detailed explanation for what the authors perceived as a knowledge deficit with a clear prescription as to what should be done to remedy this situation. There was

an emphasis upon the importance of the reforms being driven by Arabs, and that openness and a deeper engagement with the world were essential.

The World Bank Report of 1998 (ibid) had a strategic vision which was to strengthen what it defined as the five pillars of an Arab knowledge society; a formulation which, intentionally or not, has echoes of the five pillars of Islam. The World Bank's five pillars were as follows:-

- A climate of free and creative expression
- High-quality education at all levels
- A deep commitment to science and scientific research
- Productive knowledge-based industry
- A culture of learning and innovation.

The calls to build an Arab knowledge society, though, were part of a much wider critique of the social and educational systems in the region, and they provided the stimulus for a wave of national education policy reform across the Middle East region (Chapman and Miric 2009). The reforms, however, were in a particular mould, based upon a managerial approach to education and derived from a concept of knowledge and its contribution to development which had come, at least to some extent, from the earlier liberal thinkers of the Nahdah (Islamic and Arabic Renaissance).

The concept of Nahdah had arisen during the late nineteenth century when the rulers of the Ottoman Empire had sought to identify with, and embrace the ideals of, the European Enlightenment (Makdisi 2002). However, Lavergne (2004) has commented that this simple linear view of history and human development is not helpful in describing and analysing the complex series of social and political changes which have been taking place in Arab society. Other Arab commentators whilst not being complacent in their view of the current state of the education system, have demonstrated their belief that reformation and renewal need not necessarily follow the avowedly neoliberal route espoused by the SNO. Laabas (2002) believed that the educational systems in the Middle East may not be currently capable of making the changes necessary to reflect the needs of the economy and society in a wider sense; yet Hasan (2002), sought a manner of reform which would “ empower learners and involve them in transformative social action, at the local, regional and world levels, and....build a world based on human dignity, justice equity and freedom”

Numerous other reports have been produced over the past 20 years that have outlined the problems of low performance in the Middle East and have suggested remedies. Several of the reports have been published by North American universities and think tanks, for example, the Brookings Institute (Lord 2008) and the Population Reference Bureau (Assaad and Roudi-Fahimi 2007), have also contained analyses and putative remedies (World-Bank 1998, UNDP 2003, World-Bank 2003). One major report, The Arab Knowledge Report, was commissioned and jointly published with the UNDP in the region by the Sheikh Mohammed bin Rashid Al Makhtoum Foundation in Dubai (Latif, Hamza et al. 2009). The Arab Knowledge Report was highly critical of the intellectual deficit in the region, amongst its many findings, it reported, for example, that in one year the 22 Arab countries produce 6,000 books while North America, with roughly the same population, produces 102,000 books. As a whole, the Arab world publishes fewer books than Turkey, and compared to those published in the Arabic language, five times more books are published in Greek, a language that is spoken by just 11 million people worldwide (Kirk 2010). The Report points to the flight of 'human capital' from the region, particularly from the Gulf states, and this represents a significant 'brain drain' as up to 45 per cent of young people go overseas to study at universities in Europe and North America and do not return to their home countries.

There is, then, an acknowledgement of an education system which is in crisis. The solutions to the crisis have not paid sufficient heed, however, to the Arab voices of localism and dissent. On the contrary, there has been, in the policy formation to address these reported deficiencies, a clear and evident desire to cleave to what Roger Dale has described as the Globally Structured Agenda for Education (GSAE) (2000). The adherence to the GSAE has resulted in policies which have a strong resonance with the "Five Pillars" identified by the World Bank and outlined on the previous page. The role of educational technology in the creation of a knowledge economy and a knowledge society has always been prominent in all the policy pronouncements from the SNO, the World Bank, in particular, has been a strong advocate in promoting information and communication technology in education.

The education reforms, therefore, have been driven by economic imperatives and a desire by funding bodies, donor agencies and international development organisations to implant the philosophies of the Post-Washington consensus upon and within the nations of the Middle East. Judgements about the international competitiveness of national economies have come to be based upon "the quality of education and training systems (as) judged according to international standards" (Brown, Halsey et al. 1997). In a drive towards commensurability the SNO have promoted the use of standardised

testing of basic skills and competency in the application of mathematics, science and language skills. These tests have taken the form of the Programme for International Student Assessment (PISA) tests which are administered every three years to students in Grade 10, aged 15 years, on behalf of the OECD, and Trends in Mathematics and Science Study (TIMSS), which are administered every four years by the International Association for the Evaluation of Educational Achievement (IEA) to students in Grades 4 and 8 – aged approximately 9 and 13 years of age, respectively.

The administration of these tests is based on several large assumptions, not least that certain standardised forms of knowledge are privileged above others, for the sake of commensurability. This has the effect of leading to a certain homogenisation of school curricula regardless of local conditions and as Lingard (Rizvi and Lingard 2010) has observed this “numbers approach to policy work, which sidelines the broader philosophical discussions of educational purposes, focusing instead on an input/output approach, (is) attempting to offer policy insights about the efficiency and effectiveness and equity of national education systems which can only be inferred from the data which have been obtained from testing”. Notwithstanding the clear and inherent limitations in the interpretation of the findings from the international testing, much policy making across the world, not just in the Middle East, has been predicated upon students’ performance in these tests.

Local problems and concerns over schooling

The education systems in the region have not only had to address the demanding external agenda implicit within the international testing regimes, they have also had to accommodate the needs of the largest birth cohort in the history of the Middle East that was born between 1980 and 1995. Individuals born during that period are now entering adulthood, and the youngest amongst them are entering secondary and tertiary education. The 15 to 29 year olds make up 30 per cent of the region’s population and almost 47 per cent of its working age population (Dhillon and Yousef 2010). Youth unemployment, for this age group, within the region is high and more than 25 per cent of employers report that the skills gap in the labour force is a major constraint for business development (World-Bank 2008). Even though this region has had one of the fastest increases in the average years of schooling in the developing world, the material that is taught in schools has not necessarily helped young people find jobs and move into the workforce. This is largely due to educational systems that have been geared towards preparing students to serve in the public sector, which has traditionally been the employer of first choice for educated new entrants in most MENA economies

(Assaad and Roudi-Fahimi 2007). Although the public sector remains a popular choice for the majority of school leavers the sector is finding it increasingly difficult to play that role, and it will not in the future have the capacity nor the resources to provide employment to burgeoning population of young people under the age of 25.

In an effort to overcome these difficulties, in recent years government investment in education in the region has risen to an average of five per cent of GDP, which represents approximately 20 per cent of government spending (Galal and Ezzine 2008), and this free provision of education has contributed significantly to an expansion in educational access. However, despite the fact that secondary enrolment has risen to almost 75 per cent of the cohort aged 14 years and over, the rates of grade repetition and attrition rates are high, especially amongst low-income families. In Jordan, for example, 95 per cent of the students in the academic secondary track, as opposed to vocational studies, are from middle or high-income backgrounds (ETF and World-Bank 2006). Regionally, the actual rate of attrition i.e. those students who enrol, but subsequently drop out of school, is hard to ascertain, since such politically charged data are generally not freely available from ministries of education. However, recent independent research in the region, carried out in Dubai, revealed that for every 100 students who commence their secondary education at the age of 11 only 30 of these students ultimately graduate from at the age of 18 (Helal 2010) .

Global responses to local concerns

The significant interventions of the SNO into education reforms in the Middle East, which began in the 1980s and was noted earlier in this chapter, represented the current thinking in global education at that time. They were co-incident with the 'new managerialism' (Hartley 2003) which was becoming increasingly prevalent in education establishments in the English-speaking world as the neoliberal policies took hold in the UK and USA (Rizvi and Lingard 2010). As Stephen Ball (1990) has observed in his essay, *Management as Moral Technology, a Luddite analysis*, 'management' now plays a key role in reconstructing the work of teaching and, as a consequence of this, teachers are increasingly subject to systems of administrative rationality that excludes them from decision-making, yet which make them more accountable for the learning outcomes and the achievement of the students over whom they have charge. Habermas (1984) has described this as a process whereby politically and ideologically-loaded decisions are driven by bureaucratic-administrative systems which displace professionalism, moral judgement and personal / group identity with the imperatives of administrative efficiency and accountability.

When considering the history of education in the region, it must be noted that there has never been a strong tradition in the Middle East of consulting teachers and other education professionals with regard to education policies and reforms. Nonetheless, during this period of great instability and change in the region any autonomy teachers might have possessed has been eroded; the curriculum has become increasingly rigidly centralised and performance has been measured through 'standardised' testing (Apple 1996). This is paradoxical, since reforms for teacher education and preparation have been aimed encouraging teachers to assume more autonomy and control of their classrooms and their approach to curriculum delivery, see Appendix 2:193 (Bahrain_Economic_Development_Board 2007).

A pinnacle of the external accountability can be seen in the form of the international standardised comparative testing regimes, for example, TIMSS, PISA and PIRLS. Boli (2005) acknowledges this as feature of the 'world culture' of education, but others criticise the process as one which produces "normative isomorphism" as the neoliberal agendas for education lead to a gradual global homogenisation which has little concern for the expression of local cultural identity or needs (Steiner-Khamsi 2004).

Several countries in the MENA region currently take part in either or both the TIMSS and PISA international testing regimes. The consequential effect upon the breadth and balance and capacity for innovation should become clear. It is said in the world of education that "what gets tested gets taught" (Burroughs, Groce et al. 2005), there is a considerable body of literature which analyses the ways in which curricula tend to become narrower as teachers focus their energies and their interests upon the most significant indicator of their own professional performance – the levels of achievement, or measurable learning outcomes, of the students they are teaching. In Bahrain, for example, there is now a great deal of testing: there are annual Ministry of Education tests at the end of every school grade culminating in the final Tawjihi examination in Grade 12, the results of which determine the students' university admission; in addition to these, there are now independently administered standardised tests, designed by Cambridge Examinations and administered by the National Examinations Unit of the Quality Assurance Agency for Education and Training, in English, Arabic, mathematics and science in each of the grades 3,6,9 and 12. Additionally students in Grades 4 and 8 take part in the TIMSS tests. Bahrain is not currently taking part in the PISA tests. Jordan, by contrast, currently has no annual testing prior to the final "high stakes"

Tawjihi in Grade 12, but it has been a participant in the TIMSS and PISA tests since their inception.

Teaching and learning

Writing more than 20 years ago about the education systems in the Arabic-speaking world, Massialas and Jarrar (1991) observed that “the values of the patriarchal family are replicated in the school”. They noted that the Arab classroom teaches reverence to authority figures and complete submission to their will. Moreover, students are taught not to question traditional sources of knowledge and wisdom. Despite recent policy-making in the region, little of substance seems to have changed. In a background paper to the World Bank Report, *The Road Not Traveled* (Galal and Ezzine 2008), Houcine El-Haichour (2005) noted, that despite policy endeavours towards producing more student-centred pedagogies in the form, for example, of group work and enquiry-based learning, there has been little shift from a traditional teacher-centric approach to pedagogy – “The main activities in the classrooms in MENA countries continue to be copying from the blackboard, writing and listening to the teacher”. Little evidence exists of teaching that is matched to the learning needs or capabilities of different students. A research study in 1995 (Valverde, Schmidt et al.) showed that students were instructed to learn and retain facts which would enable them to answer only fixed questions with little or no context. They did not have the skills to apply their learning to novel situations or to apply their knowledge to solve problems.

According to the published findings of the Bahrain Schools Review Unit (QAAET 2010) the quality of teaching evident in many state schools in the small island state is frequently judged to be unsatisfactory. The quality of teaching in boys schools, in particular, declines as the students get older and most of the weak and failing schools are those which cater for boys from the age of 14. More than one third of the boys high schools in the Kingdom have been judged overall to be unsatisfactory, and this proportion rises to one half of all boys schools at the intermediate and secondary phases. One of the main criticisms of teachers is that they operate largely as transmitters of factual knowledge to be imbibed by their students; the teachers frequently dependent upon a single text book to move the learning forward. The pace, lesson content and style are determined by the content of the text book and few, if any, other resources are used to illustrate key milestones in learning. Little or no acknowledgement is made of the different abilities or learning needs of different students and students are not required to produce extended written work which would demonstrate their understanding or application of the knowledge.

There is no independent quality assurance or school inspection service in Jordan, but an external evaluation of the 100 Discovery Schools, which are part of the Jordan Education Initiative was conducted in 2008 (Light, Method et al. 2008). The evidence upon which their synthesis report on the impact of the Jordan Education Initiative (JEI) is based derives from direct classroom observation and interviews with teachers. The findings are broadly in accord with those from the review of schools in Bahrain, and with inspection and review reports from other agencies operating in the region, for example, in Dubai (DSIB 2010) and the earlier work of Massialas and Jarrar (1991) along with that of Houcine El-Haichour (2005) as already noted. These investigations are in agreement that it is a rarity to see anything other than frontal transmissive teaching in most classrooms in government schools in the Middle East. Technology is used very infrequently, and when it is used the most common utilisation is for making PowerPoint presentations by teachers. When interactive whiteboards are present, use is seldom made of the advanced interactive features that are made available through the technology, and the boards most often serve as passive screens for projecting teachers' work. Occasionally students themselves make presentations, which are the product of collaboration with their colleagues, but this is not a regular occurrence.

The contrast with the quality of teaching and learning which is taking place in the most successful private international schools in the region is very marked. The accepted international 'norms' of education which have emerged from European and American philosophies in the social constructivist⁹ mould (Tudge and Winterhoff 1993), promote the professional practice of teachers who are not so much autodidacts but who are working as instruments to stimulate, lead, channel and focus the learner to understand and apply knowledge in contexts which are real to them. In this model students are encouraged to be active participants in the learning process and they are expected to be able to talk about their learning and to produce a body of written work which demonstrates their knowledge, skills and understanding.

Gender segregation in schools, teacher preparation and teacher status

In all government schools in the Gulf states there is strict segregation of boys and girls in schools, and of the men and women who teach in these schools, according to their gender. This has a significant consequential effect upon the quality of teaching. Women are permitted to teach in boys elementary school, but only in girls schools for the older students. Men are only permitted to teach in boys schools. Since, in the

⁹ In the constructivist classroom, the focus tends to shift from the teacher to the students. The classroom is no longer a place where the teacher ("expert") pours knowledge into passive students, who wait like empty vessels to be filled. In the constructivist model, the students are urged to be actively involved in their own process of learning.

Middle East, teaching is a low status profession and, for men, relatively poorly paid, the quality of male teachers in many schools is often sub-optimal. In the wealthy Gulf states there is a shortage of indigenous male teachers, this shortfall being made up by recruiting expatriate teachers from across the Arab world, most frequently Egypt, Syria and Jordan. Many of the teachers in secondary schools will have a degree in the subject that they are teaching but they often lack a formal teaching qualification.

Enjoying only a low social status and having pay scales which are below average, when compared with white collar workers in their countries, the education systems do not succeed in attracting the best young graduates, and undergraduate trainees for the profession. Increasingly international evidence supports the assertion that in those countries operating “successful” education systems, one of the most important elements in achieving success in international benchmark tests is the quality of the teachers. In countries like Singapore and Finland, only the top-performing 10-20 per cent of school leavers will be able to gain entry to college for teacher preparation (Sahlberg 2011) and on graduation they are entering a profession which is highly valued within their society. Few, if any, of these features are evident in the schools of the Middle East.

Current limitations of schooling in the Middle East

In Section 2.3 in this chapter Peters’ three aspects of the knowledge economy were restated (Peters 2010). Each of these, it should be recognised, are deeply problematic within the traditional Islamic societies where the fieldwork and empirical research has been conducted. On the basis of the direct and indirect evidence cited throughout this thesis, the education reforms aimed at improving the classroom environment and encouraging learner-centric behaviour are evidently at an early stage of development. The evidence would suggest that this is because both the teachers’ own educational background, their expectations and their professional development have been rooted in a form of didacticism which is anathema to the education movements which have been sweeping the Global North for more than 50 years. There may be some isolated examples and some glimmerings of child-centred education in the early years settings, as the inspection and review reports make clear (DSIB 2010) but the degree of child-centredness is seen to diminish as the students get older. Whilst it may be the case that students’ leisure use of technology is enhancing their ‘learning’, evidence from Selwyn (2010), and others indicates that in the schools of the Global North very little of consequence, from a formal educational sense, comes from the leisure use of educational technology. Similarly ‘creativity’ is equally problematic in the crowded

school and subject-knowledge-intensive curricula which are the norm in this region. In the account of the school curriculum in Bahrain (Chapter 1, section 1.3:28) it is evident that creative subjects are seldom in evidence for most students beyond the age of 14 years; and in the most conservative of schools music-making itself is not permitted since it is deemed to be un-Islamic. Nonetheless, on the streets, creativity is a flourishing aspect of social dissent which is stoking the reform movements. Poetry has a long and much-valued place in Arabic culture and the liberation struggles which have been evident in MENA during the early months of 2011 have produced a great deal of 'liberation poetry' and other creative writing which has been widely shared. Photography too is another of the creative arts that has had an immense flowering during these turbulent times, as powerful images can be widely shared through the social networking sites. So, again, quite irrespective of what is taking place within the formal curriculum in schools, the creative component of the 'informal' knowledge economy may be seen to be taking root in the region. The final element of the knowledge economy – 'openness' – has the least scope for realisation in the context of this region where the very concept of democracy is heretical in some quarters, since by some interpretations the rulers have assumed their positions, and maintain them through divine ordination. Here too, the events of the Arab Spring may serve to underline the unintended consequences of the region's engagement with the knowledge economy. Several commentators have observed that the people's uprisings across the Middle East would not have been possible without the capacity to co-ordinate action through social media sites (Murphy 2009, Howard, Duffy et al. 2011, Salt 2012). The actual impact of the revolutionary movements in terms of creating free open and democratic states has yet to be seen. In Bahrain, to take but one example, the revolutionary fervour was tolerated only so long as it did not actually risk toppling the ruling Royal family. When the risk became real, the on-line freedoms were curtailed and, in an ironic twist, it has been the mobile telephone usage, the Facebook postings and the YouTube footage, which have served as powerful evidence that the rulers have used to incriminate those citizens who were getting uncomfortably close to the seat of power. As with so much of the evidence about young people's use of social media and the impact upon formal education, it seems to be that the use on the street and outside the classroom is of much more importance and significance than what happens in schools (Selwyn 2011).

2.5 Conclusion

As the chapter has noted, whilst globalisation is not a new phenomenon - the trade in material commodities amongst the merchant classes has been a feature of market

economies since their inception - it is the trade in knowledge itself as commodity which became a notable feature of global economies in the late Twentieth Century. The GSAE has served to reinforce the 'state theory of learning' (Brown, Lauder et al. 2008) and shifted definitions of 'knowledge' some way distance from the Islamic epistemologies outlined in Chapter One. This change was described earlier by Anthony Giddens (1991) as a shift from "mode 1" to "mode 2" knowledge, that is to say a move from "is it true?" to "what can it do?". Giddens' work was instrumental in describing what was referred to earlier this chapter, on page 47, as the commodification of knowledge. Equally, in this context, education itself, as the chapter has also noted, has become transformed from a responsibility of national ministries of education, for which nation states had previously taken prime responsibility, to something which many supra national organisations (SNO) have begun increasingly to influence within a global forum (Moutsios 2010).

The narrative and analysis of the phenomenon of globalisation have been focused through the lens of a neoliberal interpretative framework. Notions of the knowledge economy, and the political and socio-economic drivers which have propelled and inflated the concept, are such that the KE now enjoys primacy of position in contemporary discourses relating to education policy making and the future of schooling. By contrasting these forces related to globalisation with a consideration of Peters' three aspects of the knowledge economy (2010) – learning, creativity, openness, the chapter has sought to provide an interpretation of the knowledge economy which goes beyond the narrow arguments of simple human capital formation (Schultz 1961) but gives consideration to the related issues of developing citizens' consciousness, their democratic awareness and their capacity to operate as individuals operating through their own agency. In almost all respects, the state education systems in the region are failing to provide opportunities for the development of a KE in the region. Moreover, from human capital perspective, the region's schools are also failing to develop students as 'economically productive units' – the narrowly utilitarian definition of success of an education system (Guile 2010).

As this account has indicated, the deep involvement of the commercial global conglomerates in educational technology implementation in the countries which subscribe to the ideals of the 'global knowledge economy' is having a significant effect upon the governments' policies related to schools and schooling. At the most basic level of intervention, the educational technology industry has advocated, to the countries' ministries of education, the acquisition, for their schools, of ever-greater numbers of computers and to develop increasingly complex network infrastructures.

More and more however, as the “Twenty-First Century Skill” movement (Greenhill 2010) makes starkly clear, the policy motives of the education supply industries are much wider and targeted at influencing government policy in redefining the very nature of education itself.

The phenomenon which the chapter has sought to demonstrate is that, very largely, the eGovernment and education technology initiatives have been predominated by the development of a technical infrastructure without an acknowledgment of the social implication or the capacity of a populace to meaningfully engage with the new technology (Ciborra and Navarra 2005). In other words, the development of electronic information and learning systems has preceded, by some way, the capacity of the bureaucracies and, most especially, the end-users to apply technology solutions to their daily routines. The, later, research chapters of this thesis will seek to identify the influences and motives of the policy makers in pursuing this route; the research will also seek to determine the experiences of those tasked with policy implementation in the field, and the policy outcomes.

Chapter 3

The theoretical frameworks

3.1 Introduction

The theoretical frameworks are structured to enable an analysis and contextualisation of the literature review in relation to the globalisation and the knowledge economy; and to provide an underpinning for the empirical study. Their selection and the interplay between the frameworks serve to accommodate an analysis that addresses the research questions from different perspectives. The frameworks are applied from a critical perspective, they embrace theories relating to: structure and agency in a comparative sense, when considering social models from the Global North as applied in a post-colonial setting; technology in practice and models of technology acceptance; social reform and socio-economic development and transformation; socio-cultural issues relating to “modernisation” in the context of late-developing countries (LDCs) whose societies are underpinned by beliefs and ideologies, which are not consistently supportive of the modernist agenda. In practice, there is a significant overlap of the theories. The ‘concept of Singapore’ has acted as a role model for many of the education reforms in the region, and especially in Bahrain (Kirk 2014). However, the actuality of policy enactment in this small island nation in South East Asia is in complete contrast to reality of policy enactment in the Gulf; it serves as a cautionary tale to large scale ‘policy-borrowing’ without reflecting upon the cultural realities in widely differing societies. Reflecting on their six-year journey in the Singapore Future School project Lim and Tay (2013) they suggest three principles should guide and support educational innovations and ICT integration, these are simplicity, sustainability and transferability and they advocate four necessary and sufficient conditions under which this can take place, these are 1) policy and school leadership 2) physical and technological infrastructure 3) curriculum and assessment 4) professional development of teachers. It is the development of and the interplay between these necessary and sufficient conditions that underlies successful educational policy implementation and enactment. The enactment of educational technology policy in schools is a particular case of Davis et al.’s technology acceptance model (Davis, Bagozzi et al. 1989); in this case the acceptance of the technology itself is heavily nuanced by other overriding considerations related to policy, structure and agency.

The data analysis is informed by an approach based on Grounded Theory. In line with the founding principles of Grounded Theory, the data derived from the research

subjects have driven the theorising rather than beginning with a theory into which the research data are fitted in order to justify an hypothesis (the approach is summarised, later in this chapter, in Table 2 on page 89). Grounded Theory became the methodology of choice as the nature of the study shifted from its original conception which was seeking to ascertain the impact of new technologies in classrooms in the Middle East into more of an ethnography observing the enactment of policy suits within which technology played a key role in these Arab states. The conceptualisation, the development of the research questions and the methodology have been driven by the data. This approach required a shift in emphasis as the study progressed from a study about technology adoption to one centred upon policy enactment. In their early advocacy of the 'grounded' approach to data gathering, analysis and interpretation (Glaser and Strauss 1967) the authors conveyed a general stance towards the close analysis of data which in itself would produce ideas, concepts and theories. In this approach the researcher does not make the data fit neatly into a preconceived set of theories, rather the research is an iterative process where the researcher uses the data to inform and generate the theory.

This account adopts a commentary which is based upon, but is not wholly accepting of the neoliberal landscape and theoretical framework as the whole and complete frame of reference. Neoliberalism is but one dimension, albeit an important one, and one which probably has the most overriding of significance, but the neoliberalism has to be seen in the context of research subjects, many of whom are at the further end of the neoliberal/conservative-reactionary spectrum. Another important dimension is that of 'structure and agency' in this research context in a post-colonial theocratically-justified authoritarian state. For survival the key players have their performative roles to play in the unfolding of the policy formation, its enactment in government schools and the trajectory of the policy projection onto the international stage.

David Harvey (2005:2) defines neoliberalism as follows

“Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterised by strong private property rights, free markets and free trade”

Yet there have been critics of the limitations imposed by the unconstrained application of neoliberal interpretation (Barnett 2010). Barnett argues that by raising the financial and economic considerations to a level of primacy, the social factors, such as culture, race or class, become merely contextual features which shape, what are seen as, the

much more significant manifestations of neoliberalism. In other words, by adhering to a theory that maintains that people are motivated by “narrowly individualistic, egoistic rationality” (ibid: 291) where all human actions and their motivations can be adequately described by recourse to the arguments of the “*homo economicus*” school (Persky 1995), the landscape becomes flattened and oversimplified. By putting the neoliberal paradigm within a broader context which takes account of the nature of institutions, as humanly-devised entities which influence and constrain human actions, a more representative and accurate picture can be drawn. This broader context is provided by New Institutional Economics (NIE)¹⁰ (North 1981).

As the research findings have unfolded, the complexity of the interactions has begun to become clear. The particular theoretical frameworks that have been chosen are sufficiently broad to encompass the situated reality that, when interpreting the enactment of technology-related education reforms, the users’ actual interaction with the technology is influenced by complex social factors beyond narrowly individualistic rationality and a simple consideration of the human / computer interface.

Much of the rhetoric, and the research, relating to educational technology of the past 25 years has concentrated upon seeking to discern the impact of the new technology upon the learning (Selwyn 2010). Yet, in order to begin to understand the rhetoric, the policies, and the practices relating to education in the contemporary globalised world, it is necessary to look beyond both the technology and the learning to the wider political, cultural and social contexts (Biesta 2006). In undertaking a study into this broader context, the research does not exclusively concentrate upon the contested, and often contradictory, findings of investigations into the use of computers in the classroom, but sees “educational technology as a profoundly social, cultural and political concern” (Selwyn ibid :67). To achieve this, the research design endeavours to avoid the danger of “disciplinary parochialism” (Dale 2004) where education is viewed in isolation of the other raft of policy making which is taking place in other social spheres. In the case of Bahrain, the education reforms are part of much wider government policy agendas which are largely about economic regeneration. The education initiatives in this small island kingdom form part of an over-arching and ambitious Economic Vision 2030 (Bahrain_Economic_Development_Board 2007), which aims to have built, by that

¹⁰ New Institutional Economics (NIE) is an interdisciplinary enterprise combining economics, law, organization theory, political science, sociology and anthropology to understand the institutions of social, political and commercial life. It borrows liberally from various social-science disciplines. Its goal is to explain what institutions are, how they arise, what purposes they serve, how they change and how change occurs within these institutions. The framework has been chosen here to provide a way of viewing and describing the enactment of policy in a richer and more diverse way than through a lens of narrow neo-liberalism.

date, a post-hydrocarbon-dependent economy through the development and transformation of the kingdom's human capital. The successful enactment of education reforms in government schools is a key part of the policy suite.

The approach adopted here uses analyses based upon critical theory and methodologies informed by grounded theory. One of the central values of critical theory is a commitment to penetrate the world of objective appearance to expose the underlying social relations which are often concealed (Giroux 2001) As such, the narrative in this chapter includes a comparison between problem-solving theory, critical theory and grounded theory and highlights how a granular series of findings is derived from the data themselves and from an approach which does not simply take one theoretical framework as it stands as a tool for analysis. Having situated the work within these theoretical traditions, the chapter then outlines the additional specific theoretical frames within which to interpret the research findings.

3.2 The relationship between the frameworks

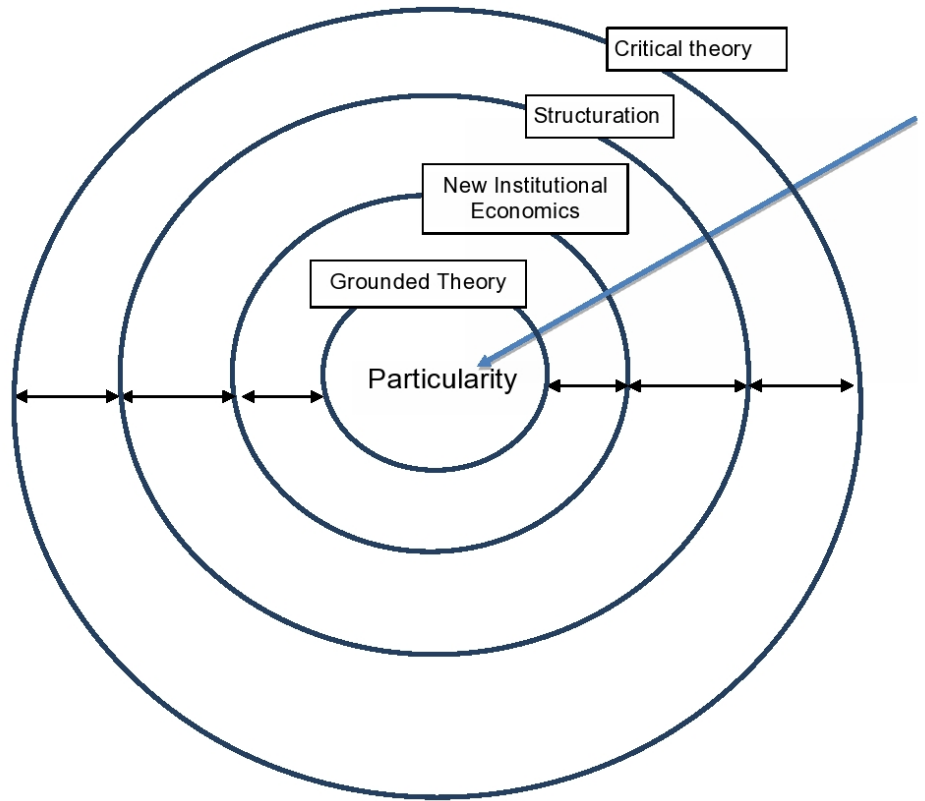
The theoretical frameworks outlined in this chapter frame the empirical research in a way which enables consideration of a picture whose complexity is not limited by a simple causal model or "means-end thinking" (Boody 2001). That is, a form of analysis where the thinking assumes a given end, and then endeavours to find the means through which it is accomplished. The overarching theoretical frame contends that knowledge does not stand independently of the social forces which shape it. Within this critical frame two sub-frames are used to form a logically structured representation of the concepts, the variables and the relationship involved in the study. The first theoretical frame employed here is that of Structuration (Giddens 1984) where the duality of 'structure and agency' is considered. For Giddens, structure has no existence in and of itself but, rather, it is the product of human agents; similarly, the argument holds that agency does not merely refer to people's intentions but rather to the flow and pattern of people's actions (Pozzebon and Pinsonneault 2005) . In Giddens' original conception, his structuration theory did not consider technology and matters such as human/computer interaction (Jones 1997). However, Walsham (2002) has adopted a structurationist approach to the analyses of IT-based contemporary phenomena within governments and commercial organisations. This forms a helpful model, the principles of which, determine the coherence of the analysis. The second frame is adopted in order to root the findings within the complexities of public-policy making and the factors influencing policy enactment. This is an approach adopted by Ciborra et al. (2005) in

their investigation and reporting upon the enactment of eGovernment in Jordan and, as such, provides a helpful, and appropriate frame of reference. Ciborra et al. adapted a framework devised by North (1981) for which he used the theoretical framework of New Institutional Economics (NIE). Following the principles of NIE, North holds that institutions are humanly devised constraints that shape human interaction, they define the actors' rights and determine the costs of enforcement of rules and transacting policies in society. NIE is a suitable foil to challenge a wholly neoliberal frame of analysis. As outlined earlier, a straightforward neoliberal interpretation has the effect of flattening a complex landscape with a simple expression of *homo economicus* as the dominant figure. As Latour (1993, 2013) has observed human motivations are complex and often irrational and they do not fit neatly into the neoliberal frame, but are motivated alongside an ostensible rationalism by myriad beliefs, superstitions and learned behaviours. In late developing countries (LDCs), by their very nature, the factors other than rationality are likely to play a bigger part.

By describing the theoretical frameworks as a series of concentric circles (Figure 2, overleaf), my aim is to show how, by their interaction and interplay, they collectively serve to provide a legitimate interpretation of the phenomena exposed through the empirical research. In this way the frameworks can be seen as working together to provide a "particular" description and analysis of the policy formations and enactment in the Ministry of Education and in the government schools.

Figure 2 shows how Critical Theory provides the overarching theoretical perspective within which Structuration seeks to interpret the balance between the agency of the actors and the structures within which they operate and this interplay is contextualised through an interplay with the complexity of an NIE frame. Grounded Theory is the framework at the centre of the interlocking theories where they can all be brought into play to describe and analyse the particular case that is being investigated.

Figure 2) The Relationship Between the Theoretical Frameworks - particularity



3.3 Critical theory and grounded theory

Critical theory, which emerged from the Frankfurt school during the 1930s (Feenberg 1981), argues that knowledge is shaped by human interests of different kinds rather than standing independently and objectively discrete from these interests. Since human interests are varied and complex, and even contradictory, so knowledge itself is fundamentally pluralistic and even incongruous rather than wholly coherent and monolithic (Friesen 2008). Rather than accepting the established forms of knowledge at face value critical theory sees its role as destabilizing this knowledge in order to generate alternative forms which are more democratic and egalitarian. It seeks to challenge accepted wisdom, particularly that generated by vested interests in the name of social justice (Nichols and Allen-Brown 1996). Grounded theory is a product of social science research conducted at the University of California in the late 1960s. The research methodology seeks to discover a theory from data that have been systematically obtained through the research process (Glaser and Strauss 1967). The aim is to get through and beyond conjecture and preconception to try and find the nature of the social interactions that are taking place (Glaser 1978). As Kathy Charmaz has stated: “..by adopting a constructivist grounded theory approach, the researcher can move grounded theory methods further into the realms of interpretive social science.....without assuming the existence of a unidimensional external reality” (2000:521).

Cox (1996) draws a useful distinction between comparative studies which adopt an approach based on *problem solving theory* and those based on *critical theory*. Essentially, problem solving theory takes the world as it finds it and comments upon circumstances within prevailing institutions and power relationships as a given framework for action and analysis. Since the power structures and relationships are not called into question the analysis takes place within these structures. The strength of problem solving theory, in this regard, is that it fixes problems within these structures and therefore limits the number of variable and parameters for consideration. However, as such, there can be no generalisations of the findings on the basis of this theoretical approach, since, although there may be an appearance of general validity, the findings are only valid in the specifics of the case being studied. Equally, in grounded theory, the interpretations of the findings are specific for the given circumstances under investigation, though, some of the findings may have more general applicability when considering similar subjects and similar settings. In the case of this current investigation, the data have driven the research into dimensions of deeper complexity

rather than just being seen as a special case for the application of conventional technology acceptance models (Teo and Tan 2012).

Critical theory stands apart from prevailing order of organisations and power structures, and seeks to discover the conditions leading to this prevailing order; grounded theory gathers the data from the subjects and seeks to define a suitable theoretical interpretation that is derived from the data. Critical theory, unlike problem solving theory, does not take any of the institutions and social power relations for granted, but calls them into question; grounded theory makes no assumptions about normative subject behaviour, but takes the data at face value. Critical theory is directed towards the social and political complex as a whole, rather than to its separate parts. Consequently, it includes an appraisal of the very framework within which people operate rather than taking these frameworks and institutions as a series of givens. Table 2) overleaf, taken from Dale (2005), provides a comparative summary of the basis for the analysis of issues using the different methodological approaches, it is included here to emphasise the suitability of using and interplay between critical and grounded theories as frame for interpretation and analysis.

Table 2) Methodological and Theoretical Considerations

Issues	Problem Solving Theory	Critical Theory	Grounded Theory
1. Relationship between problem and solution	Solution considered from with framework that defines the problem	Both problem and solution made problematic	Within the problem lie the data to inform the interpretation / solution
2. Relationship between theory and action	Theories and actions seen as discrete, disconnected activities	Theories generate frameworks for action	The research actions and data generate the theoretical interpretations
3. Relationship between frameworks for action and actions	Frameworks for action remain constant over time	Frameworks for action change over time and according to interests	Frameworks for action are identified through analysis of empirical data
4. Relationship between structure and agency	Agents autonomous of structures	Structures shape conditions/contexts for agency	The nature of the agency is determined by the structures
5. Nature of social structure	Tends towards equilibrium through change (systems/functionalism)	Inherent contradictions in structures open possibility for new agents and form of agency, and transformation	Agents derive identity and actions through their compliance with or defiance towards structures
6. Level of Abstractions	Empirical generalisation	Concept formation	Situated reality determines the abstractions
7. Level of Focus	“Actual”	“Real”	“Lived”
8. Level of Analysis	Education Politics	Politics of Education	Education as politics
9. Dimensions of Power	Decision making	Agenda setting “Rules of the Game”; preference shaping	Agency restricted through multi-dimensional power of structures
10. Scalar assumptions	Methodological nationalism; Embedded statism	“Society” not confined to national; functional scalar and sectoral division of labour	“Society” a product of interactions between structures at local, national and supra-national levels
11. Evaluation of consequences	Directly “policy-related” outputs; “Effects on” programmes	Outcomes; broad conception of consequences; Focus on relational issues; Analysis of emergent properties; contingent/unintended consequences; Programme ontologies	Significance of findings emerges from analysis of consequences of agency in relation to structure
12. Consequences for comparative studies <i>from</i> (Theret 2000)	Comparison of elements; Comparison of systems at the surface of institutional forms, but comparison not only according to the modalities of their own historical development	Comparison of relations between these elements and the autonomous systems of these relations; Comparison at a level of abstraction which makes it possible to clarify underlying structures common to these multiple forms; but also their synchronic assembly in communicational systems producing societal coherences	Comparison of agency in secular and sectarian social settings; comparison of policy enactment in democratic and authoritarian regimes; comparison between corporate statism and neo-liberal ideals

Adapted from (Dale 2005:139)

In the context of this study, an approach based upon critical theory and grounded theory, in contrast to a 'problem solving' stance, provides the most appropriate framework within which to operate. Taking the first point on the table: the KE itself is not an unproblematic concept, and rather than take it face value, its meanings and meta-meanings will be interpreted through and by the analysis, as well as providing an evaluation of its manifestation's in the education systems being studied and the ways in which people respond to the KE agenda.

The second and third points represent important considerations from a critical theory standpoint, since the study is looking at the implementation of a series of value-laden policies into structures and frameworks (schools) which need to be reformed during the process of enactment to accommodate and give meaning to the policies. The way individuals react to the value-laden policies forms a frame for analysis.

The fourth point dealing with the relationship between structure and agency is only meaningfully addressed through an understanding that the agency of the teachers and of the school leaders is, by the very essence of school as a defined social instrument, shaped by the school context, the nature of individuals' agency is determined by the structures. Critical theory enables the inherent contradictions in schools' structure and organisation to be questioned so as to leave open the possibility of new agents or forms of agency being brought into play- such as informal learning, distance learning, or collaborative learning online.

Points six to nine on the table covering the level of abstraction, level of focus, level of analysis and dimension of power can only be satisfactorily addressed using a combination of critical theory and grounded theory, since the study is looking at the lived experience in the schools and the pragmatic policy implementation at this level rather than taking the school as an unproblematic unit from which empirical generalisation is possible.

Against this background, the study looks at the teachers' and school leaders' "real" experience of the policy and the way in which the political dimension of the policy is played out in practice. The dimension of power is significant through the way in which the actual agenda setting, the modes of implementation and policy enactment takes place (Ball, Maguire et al. 2012). It is not simply a matter of decision making at a school level, but consists of a complex series of strategies to reconcile the policy ideals with the realities on the ground. At a scalar level, point eleven, there can be no confinement to the "state" as the unit of analysis, rather the analysis should take place at all levels – classroom, school, MoE and government. This is because the very essence of the policy enactment – for example, the daily interaction of the participants

with an on-line global community - and the lived experience of the students outside the confines of the classrooms transcends the nation state. It is in consideration of the final two points of the table – the evaluation of consequences and the consequences for comparative study – that both critical and grounded theories have the most traction. Through critical theory it is necessary to look at the broad sweep of the consequences of the policy actions, from the policy makers right down the teachers and the students in the classrooms, and grounded theory takes these subjects and interrogates their actions. The contingent and unintended consequences of the policy making and its enactment are of as much interest and significance as the initial policy goals – in some respects they are of more interest. Finally critical theory is of great value when comparing systems, since the comparison can be made at a level of abstraction which transcends current structures and seeks to clarify underlying features and, possible, commonalities.

By adopting an analysis which is “wrapped around” by critical theory, but centring upon the subjects through grounded theory, the frames of reference are determined by the actors rather than by the established national structures within which the principal actors are engaged. By having a multi-dimensional comparative frame, which takes an historical view on the origin of the new “skills for life” agenda, but also compares the very basis of the concept against an Arabic/Islamic culture which has never promoted the degree of neoliberal agency implicit within the modernist project, the research seeks to highlight the inherent epistemological contradictions of developing a knowledge economy in a region where knowledge is defined quite differently.

Critical theory enables the contingent or unintended consequences of policy intentions to be observed and tested at a local level. The next section examines the different dialectics, between the various players in relation to learning and technology; between conceptions of the knowledge economy from the Global North and Islamic precepts about the nature of knowledge; and between and the relationship between structure and agency in the late developing nations of the Arabian Gulf states (LDCs).

3.4 Structure and agency in Late Developing Countries (LDCs)

Structuration and the neoliberal imaginary – Islamic states confronting Modernism

As Rossiter (2003:105) states, “the mission of neoliberalism subordinates life to the demands of the a market economy” . The problems which governments face in the Arab Gulf States is to try and reconcile a policy ideology which is conceived in the neoliberal West with their populations which have been reconciled to a way of life where human agency is strongly nuanced within social and cultural structures that require allegiance to family, tribe and religion above all else. Bourdieu uses the term *conatus*¹¹ - or life trajectory (Fuller 2008) - to situate this phenomenon (Dicks 2010). In doing so he has evoked the Twelfth Century Islamic philosopher Averroes who maintained that the *conatus* which is imparted to an object is maintained and guided, or subverted, as it passes through the *aether*¹² (Fuller 2008). In this case we may take the *conatus* imparted to the neoliberal imaginary and observe its passage through the *aether* which would be represented by the Islamic traditions upheld in the family and the influence the aether has upon the progress of the concept. This is similar to the Bourdieu’s analysis of how ideas are generated and received in the academic community – the Academy – in his book *Homo Academicus* (Bourdieu 1988). The policy enactment of an ideology that seeks to re-balance a generations-old equilibrium between structure and agency has certain unique features and paradoxes within a society which craves acceptance into the international community whilst retaining strong traditional ideologies, beliefs and allegiances.

Structuration is a helpful concept here, since it does not focus on individual actors or society as a whole, but seeks to interpret how social practices are ordered across space and time (Pozzebon and Pinsonneault 2005). Whilst acknowledging that rules and resources are organised as properties of social systems, these very systems are the product of human agency. In this theory, technology is not rendered purely as an artefact but it considers, as more important, the ways in which people interact with the

¹¹ “*Conatus* is the past participle of the Latin verb, *conari*, “to try (to do something)”. It literally means “having tried,” without any implication of success. In the original English translations of the seventeenth-century continental rationalists Descartes, Spinoza and Leibniz, *conatus* was rendered as “endeavour”, the term preferred by their great English contemporary and intellectual fellow traveller Thomas Hobbes in his writings. While it was during this period that *conatus* received its most sustained analytic treatment, the concept had already been in use for two millennia, from the time of the Stoics, to refer indifferently to the inertial motion of physical bodies and life’s general tendency towards self-preservation” (Grenfell 2008 :171)

¹² the ‘aether’ – as Fuller refers to it here, represents the substrate through which an idea, a concept or a policy passes during its existence

technology, in their organisational (e.g. school or workplace) setting, and in this way they enact structures which shape the use of the technology (Orlikowski 1992)

The broad aspirational thrust of the King Hamad School of the Future (KHSF) project goes a considerable way beyond simply a plan for the improvement in the IT provision in schools. Consequently, it is legitimate to consider an application of the structuration theoretical framework which contextualises the KHSF project within a broader economic and transformational neoliberal framework. The KHSF policy seeks, with the aid of technology, to rapidly modernise a society whose very human-made structures are largely antithetical to the science and the, ostensibly, rational tradition of the modernist project – one construct of which is the neoliberal imaginary of the “knowledge economy”.

3.5 *Homus economicus and New Institutional Economics*

Whilst the notion of a KE can be seen as a modernist neoliberal construct, it can be interpreted as the culmination of the Enlightenment project and, in one sense, of the utilitarian notion of *homus economicus* (Mill 1848) i.e. humans as self-interested rational actors. This strongly contrasts with an Islamic theosophy which has it, that humans are God-created entities under His constant gaze and direction. Since the direction of travel of the education reforms being investigated is towards a neoliberal future, it is legitimate to re-purpose certain relevant theories from the realm of economics through which to help define this study.

In their analysis of the factors impacting upon the implementation of eGovernment in Jordan, and the related issues of socioeconomic development and change governance, Ciborra and Navarra (2005) adopted the New Institutional Economics (NIE) as the framework within which to analyse the interactions. Following NIE (North 1981), the theory contends that institutions are humanly devised constraints that shape human interaction, define their rights and determine the costs of enforcement of rules and transacting in society. According to Giddens (1984), the fundamental motivating task for individuals is to develop trust in the order and logic of an increasingly complex world, through these institutions, a feature which he refers to as “ontological security”– in the case of this study these institutions would be, for example, the school, the family, the mosque. In Giddens’ theory of structuration, order is socially constituted in a process where individuals create the routine actions and interactions of everyday life,

reflexively recognise order and continuity in these actions, and in turn reproduce that order by on-going participation in these patterned social practices. The self, in this context, is an anchoring device that helps the individual to relate to a fragmented and ambivalent world (Kuentzel 2000) with an expanding “plurality of choices” and a pervasive sense of ambiguity in everyday conduct. Education systems from the Global North have evolved and grown to engineer students who develop this strong sense of personal identity that operates within social structures that are mutually constitutive of each other. In a late developing state (LDC) there is process of transformation, contestation and political transition where transition costs are inflated by the bargaining processes between state-led reforms and other agents in society (Ciborra and Navarra *ibid*). In many ways the school structures in these LDCs do not reflect the needs of the neoliberal economic systems into which school leavers will be thrust. Certainly the schools’ role in helping students to develop strong sense of personal identity, a significant feature of the schools and schooling from the Global North, is anathema to education systems in the Arabian Gulf, where such freely-choosing autonomous individuals are a threat to the governments of the six countries of the Gulf Cooperation Council all of which are undemocratic, authoritarian hegemons which have cloaked themselves in Islamic rectitude.

The neoliberal, or minimal, state – the direction towards which the forces of globalisation are driving countries, may not be the most appropriate or, indeed, achievable goal for an LDC like Bahrain. In the context of his investigation of government in Jordan, Ciborra (*ibid*) refers to Wade (1990) and Khan (2002) and their proposition that there is insufficient evidence to support government initiatives which are intent on moving state economies in this direction. Figure 3 is used to illustrate the debate.

The range of policies and their outcomes is represented on the horizontal axis In Figure 3. The outcomes of the policy initiatives can be successful i.e. promoting effective application of the KE principles, or they could fail or be impeded i.e. by the conservative social forces that are impeding progress towards a knowledge society. Enforcement will be easier if the policies promoted by the state are not patently promoted against the social orthodoxy of the powerful religious leaders. If the government is unable to gain the support of these groups, the likely result will be a fragmentation of interests. This, in turn, would lead to high costs being incurred for appeasement, or in the case of significant social reforms leading to street protests,

higher costs for the enforcement of law and order. In Figure 3 these costs are expressed on the vertical axis as 'appeasement' and 'enforcement' costs. The growth and the social impact of the policies will be greatest when the government has long term credibility with an attendant orderly civil society.

To illustrate the utility of the Figure 3, one may take, for comparison, two contrasting examples of transition states over the recent years. Russia's transition from an authoritarian state with a centrally planned economy to a democratic state with a market economy at the beginning of the 1990s failed because the elected government lacked credibility over the rights of the privatised companies which were created and its capacity to maintain an orderly civil society with low corruption. The privatised companies did not re-invest their profits but sequestered them for private consumption and the electorate endeavoured to create a re-establishment of a centrally-planned socialist state through the electoral resurgence of the former Communist leadership (Olsen 1999). By contrast the development of the South-East Asian economies since the 1960s, notably Japan, Taiwan and Singapore, has been characterised by a durable social acceptance of the market and social reforms within orderly communitarian societies where the strong consensual governments have enjoyed popular support (Wade *ibid*).

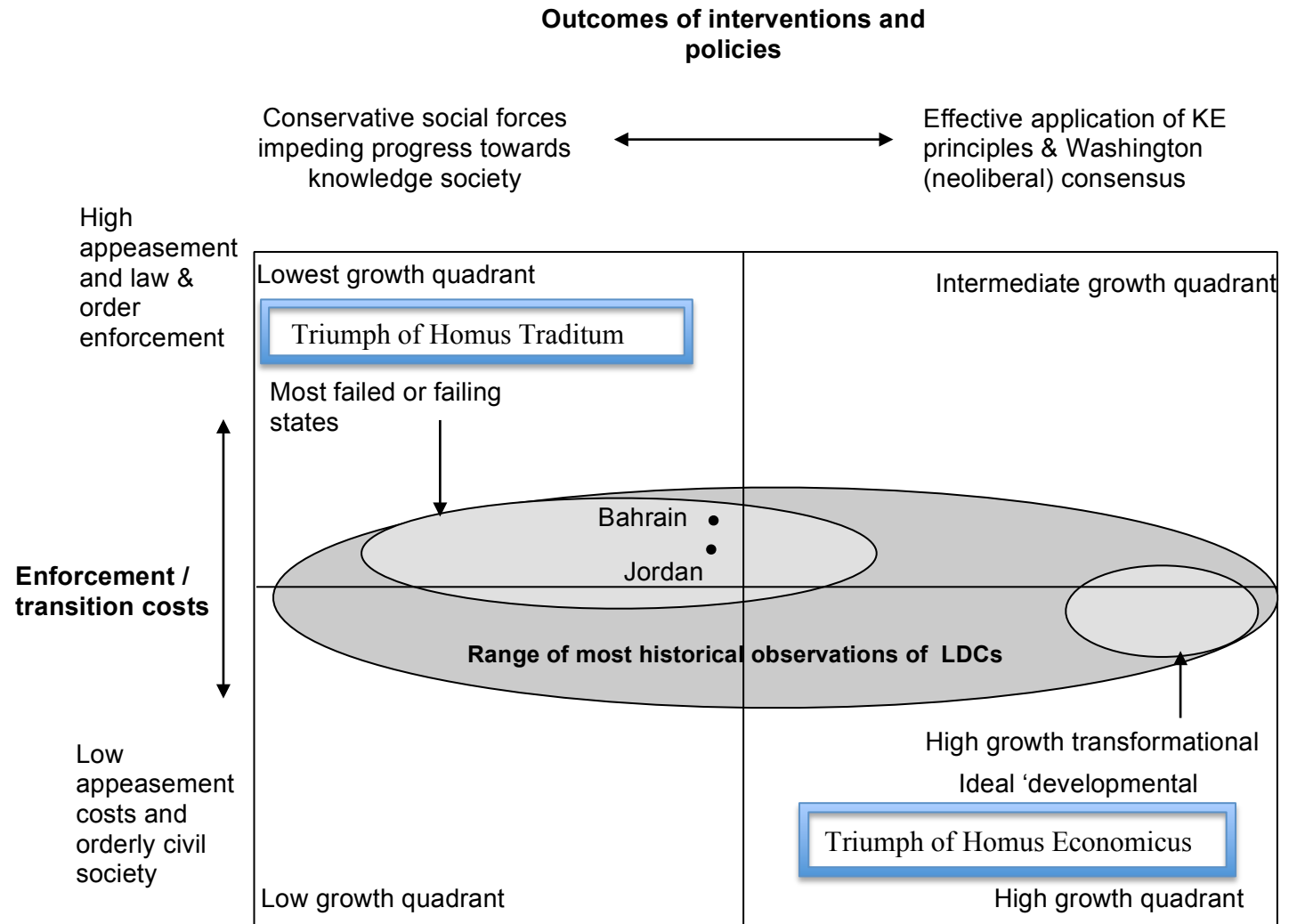
The model is useful in this context since it describes the dynamics of policy enactment in the LDCs of the Middle East. Jordan is used here as a comparator to Bahrain. Jordan is the state within the MENA region whose society and social milieu most nearly match the neo-liberal constructs of the Global North. It is from Jordan that the Education Reform for the Knowledge Economy project first emerged, and it is from Jordan that the policy borrowing for the KHSF originated. The policy-intents of these two Islamic states – at least from the image projected on the international stage (Al-Nuaimi 2012) - coincide in as much as there is a shared desire to implement social and economic policy reforms which are emblematic of the neoliberal imaginary of the Knowledge Economy. Whilst from the perspective of consumerism and consumption, the neoliberal policy construction has gained some traction in these Middle East countries. However, the deeper education and social reform intents have been less successful. These policy motives – imported from the Global North - are unpopular in many parts of these traditional, patriarchal societies: they challenge cultural orthodoxies, beliefs and expectations, since they promote a belief in the growth of private enterprise and a shrinking of the state as employer of first choice and

transformation of schooling away from traditional nation building towards a belief in the primacy of state education systems as agents of human capital formation.

In the Figure 3 – Bahrain and Jordan are placed in a similar position on the vertical axis – they shared a similar GDP growth rate of around 6% during the period 2000-2009. Bahrain is placed above Jordan on the Y-axis, since the enforcement costs of neoliberal policy reform are significantly higher in this fractious Arabian Gulf state, riven as it is by sectarian dissent, in comparison with more liberal westward-learning Levantine state of Jordan.

The diagonal axis from top left “Homus Traditum” to bottom right “Homus Economicus” represents the opposite extremes of a trajectory where the desired direction of travel for the “progressives” is towards high economic growth and a modern neo-liberal future. In opposition to this are the forces of tradition and socially conservative interpretations of Islam which are impeding the speed of travel towards a knowledge economy.

Figure 3 - The dynamics of neoliberal policy enactment in LDCs



Adapted from Khan (2002:30) and Ciborra (2005: 149)

3.6 Conclusion

This study of the phenomena related to globalisation and the knowledge economy in the MENA region takes the Gulf state of Bahrain as a particular case study. The Islamic countries of the Middle East share many common features, but are in other ways sharply contrasting, partly as a result of their different colonial experiences – the Arabian Gulf states, for example, never experienced Ottoman Imperialism (Makdisi, 2002) to the same extent of the littoral Mediterranean Levantine states in the north of the peninsula.

The use of critical theory requires the application of a “dialectical critique” (Therborn 1996) whereby both criticism and reconstruction are implicit. That is to say, the technique reflects on the current situation and the constraints which are evident in this human construction, but it also considers a reconstruction where alternative constructions are possible. It does not merely seek to “solve problems” but to arrive at conclusions or new constructions on the basis of reflecting on the context within which the problems exist and positing novel solutions (Robertson and Dale 2009).

Whilst identifying neoliberalism as the predominant driver for policy and practice, other strong cultural considerations are at play in the Middle East that require a more complex analysis in order to arrive at an interpretation which begins to build up a more accurate picture. The theoretical frameworks enable the three aspects of the knowledge economy – learning, creativity and openness (Peters 2010) – the identification of which were used in the introduction of the research study to provide separate and distinctive categories for analysis. The research considers how these aspects are manifest in policy making and in practice. The empirical phase of this study seeks evidence of the manifestations of these elements of the knowledge economy in the government policies and the educational practices in Bahrain with references made to other Gulf states, particularly Dubai, and countries in the wider MENA region, notably Jordan.

The next chapter outlines the research methodology and the strategies employed to gather, analyse and interpret the empirical data.

Chapter 4

The Research methodology

4.1 Introduction

The events of the Arab Spring have had a significant effect on the ways in which it has been possible to conduct this research project. During the early months of 2011, starting in Tunisia, a wave of uprisings took place across many countries within MENA. Young people, in particular, were railing against the authoritarian and undemocratic regimes in the region. Governments fell in Egypt and Libya and elsewhere the ruling classes were significantly destabilised. The reaction of the Gulf monarchies, of which Bahrain is one, was to become more authoritarian, as they endeavoured to withstand the onslaught of public demands for democratic reform. This, then, was the backdrop to my research.

In the project's original conception, it was anticipated that the findings would be informed by a great deal of first hand observation of technology use (or non-use) in schools. However, since much of the political activism has been taking place within schools and local communities, the Ministry of Education in Bahrain has been reluctant for researchers to be given free access to schools and to interview teachers and students. This resulted in a redesign and refocusing of the data gathering instruments away from schools themselves to the more neutral setting of the university campus in Bahrain. It is on the university campus that the focus group meetings were held and these meetings were supplemented with field visits to the schools to interview school principals, albeit within somewhat controlled confines; and to the Ministry of Education offices to interview government ministers and advisers. In its original conception the research plan had been to interview focus groups of school students, as well as senior teachers. This would have provided for a richer account of ICT usage and of the day-to-day realities within the schools from the students' perspective. However, since school access has proved to be so problematic, the focus has become more about the policy making and its manifestation from the perspectives of the policy makers, their advisers and the senior school leaders tasked with the policy enactment. Adopting a research methodology based upon Grounded Theory has meant that the data have driven the analysis, and the theories relating to technology acceptance, have emerged as having less prominence than those related to ideology and the management of change within bureaucracies, which are revealed as being sclerotic and resistant to

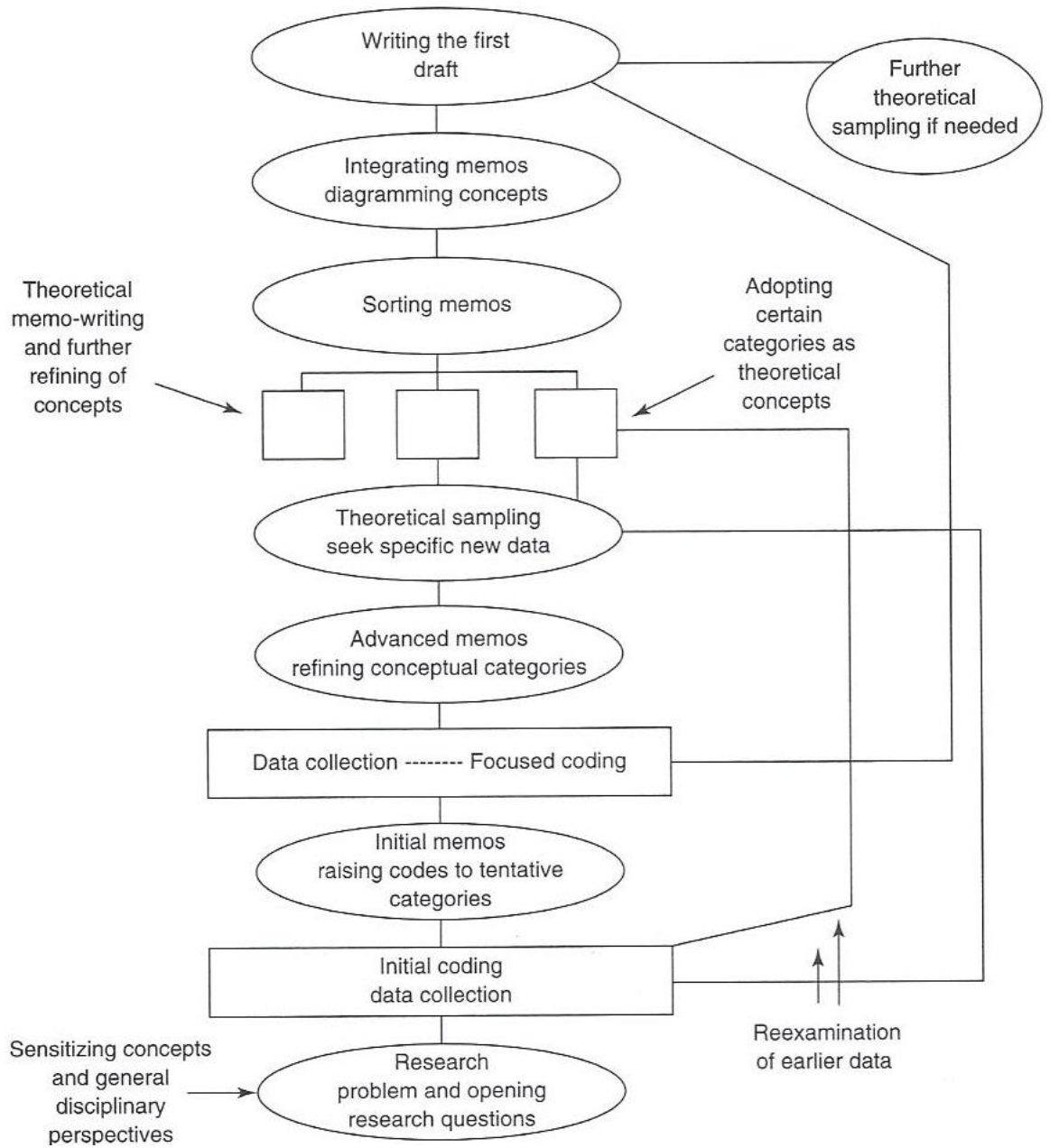
innovation. Acknowledging that, as Nancy Law states (Lim and Tay 2013:xv) “ICT per se cannot be the driver or catalyst for change, but where there is already a commitment to school-wide innovation and change, ICT can serve as levers to accelerate the intended changes”, the focus of my research project, has centred more upon people in relation to conflict and change, rather than people in relation to technology.

The data sampling took place over a period of about six months during the spring of 2012, the country was still in a raw state of nervous repression from the state of emergency which had been imposed a year earlier in the wake of the failed uprising in the Kingdom – the local response to the events of the Arab Spring taking place in the northern part of the Arabian peninsula. The teachers and senior leaders who formed the subjects for the focus group discussions contained a great number of individuals who had reason to feel resentful towards the regime. Several people had been suspended from their schools for a period through being caught on CCTV cameras at anti-government rallies, and who had suffered guilt by association; others had been demoted or transferred to schools far distant from where they were lived or were in a phase of education where they had no background or experience (for example a school leader who had been transferred to a boys primary school when, for all of his career he had worked with boys in the secondary phase of education). The simmering resentment occasionally boiled over in the focus groups and led to some emotional revelations. The data derived from these interviews influenced the course of the research and resulted in a refocusing away from ICT policy implementation and ‘schools for the future’ based upon a technological revolution, towards a deeper reflection on the factors that influence education policy enactment at a school level. Equally, at the level of the senior policy-making within the Ministry of Education, an air of unreality permeated the dialogue that was somewhat utopian, and often in denial of the social crisis which gripped the country.

These emotional and nakedly political overtones impacted not only upon the data-gathering processes, but also upon the interpretation and analysis. The themes that emerged as a result of the coding and the iterative revisiting of the data and the subjects are derived from these empirical data and the deeper human stories that lay beneath the enactment of the reformist policy initiatives.

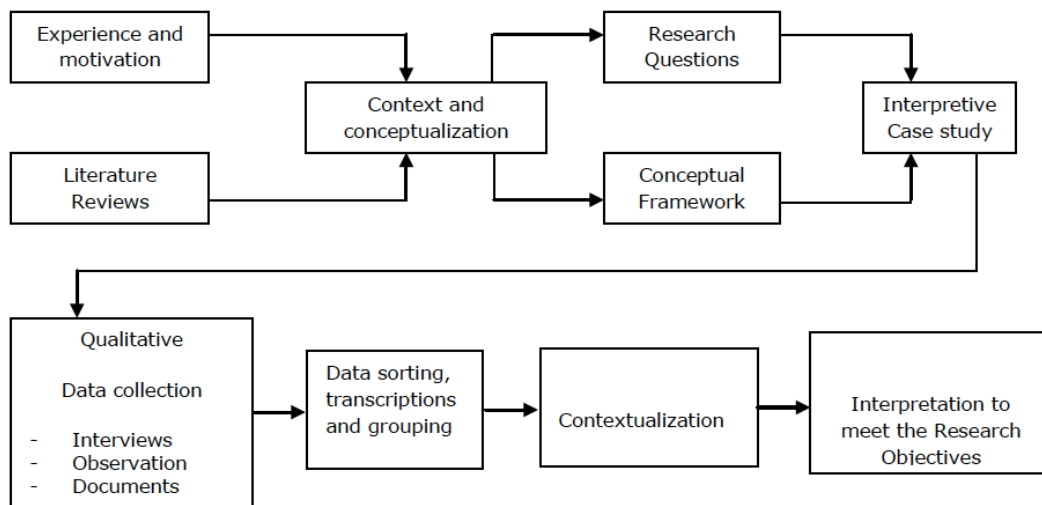
Overleaf is a schematic (Figure 4) which summarises the Grounded Theory process. Beginning at the bottom of the diagram on the left, the initial lengthy process consisted of sensitizing the concepts and establishing the disciplinary perspective from which arose the research problem and initial research questions. In the light of the data that were gathered initial coding took place and data were categorised through this coding; but as the diagram makes clear this was an iterative process, with the initial data constantly being re-examined, and, as necessary reinterpreted and coded.

Figure 4) The Grounded Theory Process



Another way of describing the process, which takes account of the fact the GT theoretical framework is but one among several frameworks that have been applied to this research project, is that described by Walsham (1995). Figure 5, below, has the flow of the research process moving in the opposite direction to Figure 4. The iterative process is implicit in Figure 5 as the research activities move from the top left box – which considers the experience and motivation of the researcher towards the bottom right of the figure where the data are interpreted to meet the research objectives. This model indicates that by collecting data and, analysing the contexts whilst working within the chosen theoretical frameworks, valid interpretations can be made which serve to meet the research objectives. The schematic below summarises how this iterative process has operated and how the research questions have become more sharply focused as a result of the data that have been gathered and the contexts in which the gathering has taken place.

Figure 5) Flow Diagram of the Research Process



based on Oates (Al-Baker 2011) and Walsham (Oates 2006)

4.2 Conceptual Framework and Research Questions

The study is arranged with three distinct and linked phases of research and data collection as follows:

- 1) Literature reviews and the collection of relevant policy documentation and analysis;

- 2) interviews at elite actor level - policy making : investigating the origin of policies and the motives of the policy makers;
- 3) interviews with school principals and focus group discussions with policy actors at a senior school leadership level.

Adopting a critical and comparative approach, the research seeks to identify, along with the key local and national drivers, the supra-national influences which have impacted upon national policy-making decisions. A similar approach was adopted by Lawn and Lingard (2002) where they sought to analyse the perception of the actors involved in educational governance and the role of transnational players in relation to national policy-making and the involvement of agents from the European Union. My research, reported here, considers the policy-making agenda, the manifestation of the policies on the ground and their subsequent enactment.

The study presents a series of analyses of the role of technology policy in the educational system in Bahrain, with some reference made to the other Gulf states, the wider MENA region, and Jordan in particular. It provides an insight into the following areas of academic interest: The role and the significance of supra-national agents in the formulation of education policies; The relationship between state education and the development of the knowledge economy; The challenge of reconciling Twenty-First century learner-centric education with other educational, social and cultural traditions.

As such, the study has aimed to address the research questions:-

- 1) What is the nature of the reforms and what do policy-makers wish to achieve through the development of ICT on school curricula? For example, what do they believe the link to be between school-based ICT and the development of the knowledge economy?
- 2) What are the drivers for these reforms at an international, national and local level, and who are the principal actors e.g. OECD, UNESCO, World Bank?
- 3) Within the context of these traditional Muslim societies are there any inherent contradictions and conflicts between the beliefs and traditions of the population and the development of a Twenty-First Century curriculum which embraces globalisation and the knowledge economy?

As the nature of these questions suggests, the study is placed within the contemporary theoretical framework of the globalisation of public policy-making as articulated by Lingard (2010); the debates about the nature of the knowledge economy in the context of Peters' analysis (Peters 2010); and the contemporary thinking related to comparative education, informed by the work of Stephen Ball (1998) and Roger Dale (2000) relating to the marketisation of education and a transformationalist narrative.

The study explores the paradox that, as Lingard (*ibid* p. 81) and others (Hartley 2003) have observed, the type of pedagogy needed in order to achieve the creativity and original thinking associated with the knowledge economy is not necessarily produced by the ways in which education technology policies are often implemented. Much deeper institutional reform and more rigorous analysis of current practice rather than speculating about technology-enriched educational futures is necessary for this to happen (Selwyn 2010).

To address the research questions in a way that enables the detailed investigation at macro, meso and micro levels of analysis, a qualitative ethnographic approach has been adopted. The approach utilises schools as case studies and puts them in a comparative frame at a school-to-school level, but also in the wider comparative frame between the education systems of the Global North with those of these late-developing countries (LDCs) of the Middle East. Yin (2009) states that this approach allows the researcher to explore or describe a phenomenon in context using a variety of data sources. It allows the researcher to explore: individuals or organisations, relationships, communities, or programs and supports the deconstruction and subsequent reconstruction of various phenomena.

This approach is valid since, while the global policy agenda has common features across all of the countries, the complex social, political and cultural factors differ in the MENA region and in the particular the national context of Bahrain. Bahrain is one of the relatively wealthy countries in the Gulf, it has subscribed to the international education reform agenda, not because of an immediate economic imperative, but in recognition of its high-dependence upon rents from hydrocarbon extraction and a desire to maximise its human capital to enable the further development of the service sector – notably international banking and the headquartering of regional offices of global conglomerates - and the development of a more diversified economy based upon the development and exchange of intellectual property – in short, a 'knowledge

economy'. The motivations for education reform are, however, complex and related to the hegemonic control of the Island by the ruling Khalifa family – a Sunni dynasty, in a country that has a majority Shia population (Davidson 2012). These factors, within a context where the majority of the population is religiously conservative, create a situation in which it is problematic to unquestioningly apply the wider philosophic underpinnings upon which the KE discourses are built. The research looks at sub-units (i.e. schools) that are situated within the larger case study (the state education system); this enables data to be analysed within the sub-units separately (within case analysis) and between the different sub-units (between case analysis) or across all of the sub-units (cross-case analysis) (Baxter and Jack 2008)

4.3 Methods of Data Collection - sampling and research procedures

A mixed methods approach based on GT is adopted for the study. Primary data analysis has been undertaken on the evidence gathered from the empirical data – document analysis, interviews, focus groups, classroom observations. Qualitative mixed-methods research enables the collection of comprehensive, complex, and nuanced empirical materials (Ryan 2011). According to Creswell et al. (Creswell, Slope et al. 2006), a well-designed qualitative study using mixed methods, which gives priority to empirical evidence gathering, enables broader and deeper interpretation of the data than a quantitative study using a random control trial approach.

Moreover, a qualitatively driven mixed-methods approach is one that focuses on the complexities of context, experience, and meanings but does not exclude other ways of knowing (Hesse-Biber 2010). The data collection at the school practitioner level has adopted an essentially ethnographic approach and, as such, it provides a means for both studying and engaging in a dialogue with students and teachers. However, as Hammersley (1983) has stressed, the researcher(s) must be constantly aware that they are “part of the world [they] study...this is not a matter of methodological commitment, it is an existential fact. There is no way in which [they] can escape the social world in order to study it” (Hammersley and Atkinson 1983). With this in mind, the researcher(s) have needed to be constantly reflexive and consciously aware of their place, firstly in the construction of knowledge and secondly in the influence which they may have on the behaviours of the observed. In the light of these factors, operating as a critical researcher, one has needed to acknowledge one’s own biases,

prior knowledge and theoretical positions at all times.

Sampling and research procedures

The procedures for data gathering have been designed to provide the basis for a rich qualitative analysis. At a policy level the context in which the policies are formed is of great significance, since as Ritzvi and Lingard (2010) have highlighted: the discourses that frame policy texts are no longer located simply in the national space, but increasingly emanate from supra-national organisations (SNO), and, indeed, a global educational policy field is emerging.

The purpose of the interviews with policy elites has been to try and ascertain, at the level of these influential actors, the context and overarching rationale for these policies. The policies quite specifically relate to the promotion of educational technology in schools as a source of innovation, but are also part of a much larger policy ensemble relating to wider educational matters, the skills agenda and economic considerations. The individuals selected for interviews include the influential policy advisers as well as the decision makers themselves. The breadth of the base and the different backgrounds and responsibilities of this elite group of people will serve to provide the bases for a detailed analysis of the policy context.

The sampling methodology for the school leaders in the study could be criticised for being overly opportunistic, but as an ethnography adopting a GT approach care was taken not to hastily over-generalise. The findings from each of the school cases represented evidence simply of and from that particular case. It was through the coding that patterns emerged and more general interpretations were made. Readers must be reminded that the research was taking place during a period of significant social unrest in the country of Bahrain, so opportunities for typical scientific sampling techniques e.g. random or purposive, were significantly constrained. The manifestation of the response to the social unrest in government ministries was typified by a state of almost catatonic sclerosis at the Ministry of Education. In this important ministry all requests to conduct scientific research involving staff and students on school premises were invariably denied at this time. My research interviews with headteachers, whilst not being covert, took place behind the closed doors of the individual headteachers' offices thanks to my position and professional status at the Bahrain Teachers College; consequently, the participants felt relatively confident to respond to my questions honestly and openly; the focus group interviews took place away from the school campuses, so again, the

individuals – all of whom were guaranteed anonymity – felt able to speak with confidence. Care was taken to include within the sample a headteacher from each of the phases of education – elementary , intermediate and secondary – and equally from boys and girls schools. The questions used for the individual interviews and for the focus groups are summarised in Appendix 5, but, since the interviews and focus groups were deliberately semi-structured the questions represent general areas for exploration rather than being precise in their intention to produce specific answers.

Table 3) Data Gathering Matrix

Action	Evidence base
a) Documentary Analysis	Policy docs relating to education reform – e.g. Economic Development Board - Michael Barber, McKinsey; Docs and decrees re. KHSF project. <i>See appendices 1,2,3 &4</i>
b) Interviews with Policy Elites	Interview at Ministerial level X 1 project management level; X 2 international adviser level. X 1
c) Interviews with School leaders	Individual interviews with six school leaders on their school premises – 3 from boys and 3 from girls schools at elementary, intermediate and secondary phases
d) Focus group discussions:-Senior school leaders and aspiring principals	Two focus group interviews each with eight senior school leaders and aspiring principals on the neutral ground of the university campus away from their schools.

Documentary Analysis

Documentary analysis was undertaken in order to identify the public-facing declarations of policy intent. The ministerial statements and documents were analysed using Critical Discourse Analysis so that not only for their content, but also their use of language and phraseology was examined. In particular the analysis has sought to identify the use of particular forms of language which may imply a neoliberal economic agenda having a priority over a pedagogic one; that is, one which sees education as an instrumental process for the development of human capital rather than one that is enabling and empowering to individual learners.

The analysis of the policy documents was undertaken with a view that these are not static artefacts to be viewed narrowly in their own terms with the narrative being taken at face value. Rather, as Prior (2003) has said: “ in approaching documents as a field for research we should forever keep in mind the dynamic involved in the relationship between, production, consumption and content” . Moreover, by viewing the policy itself as material-semiotic artefact this analysis and interpretation can take full account of the different levels of policy manifestation. In this context, any failures in policy enactment which are identified at a local level are counterbalanced by the policy projection on the international stage.

The research has also taken into consideration the target readership of the policy documents – since in some cases the language and the drafting is likely to be of a different order if the targeted primary readership is the international donor community (e.g. OECD, USAID) rather than, first and foremost, a domestic one. The assertions and aspirations in the policy documents help to formulate the structure and the content of the one-to-one interviews with high ranking government officials and their advisers.

In common with almost all of the reform initiatives in the Middle East over the past twenty five years, the policy formation has been undertaken with assistance of consultants from the English-speaking world. Consequently, the policies and the supporting documentation are either originated in English or an accurate translation exists. Analysis of documentation has been undertaken with the understanding that, the policy is more than policy document text (Taylor, Ritzvi et al. 1997). The process through which the policies have arisen is also of great significance, particularly the influence of global players in the policy formulation. Policy documents have been analysed according to patterns which emerged during the course of the research – for example common usage of particular policy objectives, phrasing and terminology. In particular commonalities regarding globalisation and the internationalised knowledge economy discourse as promoted, in particular, by the OECD. However, of equal interest is the life of the policy itself as it moved through the areas of policy enactment locally and at gatherings of SNO, for example UNESCO in Paris. As the research findings show, the KHSF policy has enjoyed its own existence as a vehicle for national hubris quite irrespective of its efficacy or enactment at a local level.

Individual interviews with elite policy actors

Yin (2009) confirms that interviews are one of the most important sources of case study information. Owing to their high social status and their breadth of knowledge and understanding across a range of policy matters the interview with elite policy actors were semi-structured and open-ended to give the interviewee the scope and opportunity to extemporise on issues which they saw as being of particular significance. The interviewer, therefore, has needed to be an active listener able to respond and react to both the substance and the style of the responses from the interviewee. Charmaz has observed (2006) that any competent interviewer shapes questions to obtain rich material and, simultaneously, avoids imposing preconceived concepts; keeping questions open-ended has helped to elicit responses from the interviewees which are more spontaneous and less driven by the research agenda.

High ranking government officials can often be very guarded in their responses during interview sessions, so it has been important to be able to triangulate their responses from other sources. As Berry (2002) noted, interviewers need to approach elite actors with caution as to the veracity of the statements they are receiving since “it is not the obligation of the subject to be objective and tell the truth”. To mitigate the sort of face-saving or masking techniques which policy elite actors may use when discussing contentious issues of policy into practice matters I myself, as the principal investigator, conducted all of the sessions and took note of the various series of non-verbal communication cues which the interviewees adopted when they felt the need to be evasive.

When analysing the data arising from interviews with policy-making elites the case-oriented strategy, which has been adopted, (Miles and Huberman 1994) ensures that the cases are “tested” against theoretical frameworks – for example, globalisation, neoliberalism and new institutional economics. Cases are inspected in a set to see whether they fall into clusters or groups that share common characteristics. In this latter, variable-oriented strategy the inner-dynamic of the case is replaced with a search for patterns and themes that cut across cases. (Folkestad 2008)

One of the common features of all the ministries of education in the countries of the region is the strong presence and influence of English-speaking advisers and consultants from, usually, Europe, USA or Australia. A comparison of responses between advisers and appointed ministers seeks to identify the extent to which the

“change agenda” is an intrinsic self-generated one for each of the countries or whether the agenda has so many commonalities that supra-national rather than local considerations are the evident drivers. The interviews were conducted in English with the local government officers, since, in the main, these senior government officials will have been educated at international universities. Where necessary the researcher has had a bi-lingual colleague to translate and intervene as necessary, for purposes of clarification. All the interviews were transcribed and coded for patterns and recurring themes to enable analysis and comparisons to be made between different levels of stakeholder and government officials.

Individual interviews with school leaders

School leaders are key intermediaries in the enactment of government policy, and to ascertain their role as well as their opinions and beliefs, an ethnographic approach was adopted. School leaders have been observed and interviewed in their school setting to gain an authentic view of their working environment and their demeanour within it, and to report on this “precisely in the manner in which it so appears” (Moran 2000). The intention being to take a “fresh and unprejudiced look” (ibid) at the fundamental and essential features of a school leader’s work. They have the task of reconciling the “lived world” (Husserl 1931) i.e. the day to day hurly burly of life in school, with the higher level aspirations of ministries of education. Unlike in many parts of the world, notably the UK and USA, the school leaders in this region do not, typically, enjoy any degree of local discretion or autonomy of action. Their role, and the duties attached to it, is highly prescribed by the ministry of education (MoE) that appoints them. Nonetheless, these individuals have a strong influence on the ethos and the functioning of the establishments whose operations they oversee. Their educational beliefs and philosophy, as well as their leadership skills help to determine the emphasis they place on different activities in the school.

The interviews were designed to be semi-structured since “the aim of a qualitative interview is to elicit participants’ accounts of aspects of their experience, rather than to collate answers to specific questions” (King and Horrocks 2010). The school leaders were encouraged to talk freely about their own educational philosophy, the way they organise their school, the role they see for educational technology in education and their understanding of Twenty-First Century learning skills. When ascertaining school leaders’ attitudes and understanding of the use of educational technology across the

curriculum to promote higher order thinking, an ethnographic approach was adopted as suggested by Kvale and Brinkman (2009)

“This kind of interview seeks to obtain descriptions of the interviewees’ lived world with respect to interpretation of the meaning of the described phenomena. It comes close to an everyday conversation, but as a professional interview it has a purpose and involves a specific approach and technique; it is semi-structured – it is neither an open everyday conversation nor a closed questionnaire.”

Focus group discussions with teachers and school leaders

The limitations of one to one interviews have long been recognised (Krueger and Casey 2000) because of the tendency of the interviewee to adapt an essentially passive role in a process which is driven by the interviewer as interrogator. In order to promote a more active discussion and one which is less rigidly driven by the researcher at every turn, focus groups have been chosen as an additional data-gathering strategy in order better to probe and ascertain people’s attitudes and responses towards technology in education. In these focus group discussions, a moderator has guided the discussions of a small group of representative individuals taken from the population being studied. Focus group discussions are helpful in providing powerful insights into the attitudes, beliefs and opinions of the people most affected by the changes being studied (Morgan 1998). Through creating a comfortable permissive environment a skilful moderator of a focus group uses open-ended questions to encourage a conversation and the sharing of views amongst the participants (Krueger and Casey 2000). Stewart and Shamdasani (1990) have summarised the more common uses of focus groups to include:

- obtaining general background information about a topic of interest;
- generating research hypotheses that can be submitted to further research and testing using more quantitative approaches;
- stimulating new ideas and creative concepts;
- diagnosing the potential for problems with a new program, service or product;
- generating impressions of products, programs, services, institutions, or other objects of interest;

- learning how respondents talk about the phenomenon of interest which may facilitate quantitative research tools;
- interpreting previously obtained qualitative results

In the case of this research study, the purpose of the focus group was to ascertain, from the various groups, their awareness of the wider policy agenda with regard to cross-curricular educational technology integration and their own experiences in school. Participants were asked to identify the ways in which technology is being used in the classroom. They asked to make observations as to how different, innovative or challenging the students' learning experiences are manifest in the light of the reforms.

Morgan (ibid:12) has identified three fundamental strengths that exist within focus groups: - they enable the exploration and discovery of the participants' lived experience; they facilitate an understanding of the breadth and depth of the context; they assist in the interpretation of the findings. There are, however, several drawbacks and ethical issues which must be considered and accounted for. The focus group is highly dependent upon the skills of the moderator, and the group dynamic of the subjects can also have a bearing on the outcomes. For example, a vocal and persuasive minority can sway the focus group, unless the moderator is acutely aware of the risk of individuals exercising their own hidden agenda. From an ethical perspective, issues of privacy are paramount. Participants need to be assured that the proceedings are confidential and that they should not share any of the focus group interview disclosures outside the group.

Focus group sessions were conducted with senior teachers and school leaders attending leadership-training courses at Bahrain Teachers College. Groups consisting of from 6 to 8 participants made up of representative sample of educators from boys and girls schools and from all phases of education – Elementary, Grades 1-6; Intermediate, Grades 7-9; and Secondary, Grades 10-12. The teachers at these schools, by their seniority, have been in the education system for at least ten years and, consequently, have witnessed the relevant reform initiatives from their early conception to their current enactment. A feature of the Bahrain education reform programmes in the study, in common with many others at this time (Dale, 2000), is a desire to improve students' independence, within a neoliberal imaginary which seeks to develop their entrepreneurial skills, not least in their capacity to be intrinsically motivated, to take individual initiative and to engage in higher order thinking skills. All

these facets have been designed both to facilitate a smooth passage into higher education as well as providing the Twenty-First Century Skills expected by employers. The focus groups were audio-recorded and transcribed and the transcriptions coded for subsequent analysis.

4.4 Data analysis

As I have indicated in the chapter on theoretical frameworks (Chapter 3), the data analysis is guided by Grounded Theory (GT). There is a current acceptance that from the time of their original generation of their conceptual approach to qualitative research Glaser and Strauss, as individuals, have diverged in their precise interpretation of qualitative data. Glaser has wanted to use the grounded theorising approach to develop some generic concepts which are independent of the contexts of their discovery; Strauss, on the other hand has stressed the importance of the data themselves being coded accurately and consistently and analysed, with the theory being generated by the analysis rather than the data themselves on a case by case basis (Hammersely and Atkinson 2007). In the data analysis here, I have endeavoured to let the data drive the theorising, yet some general common themes have arisen which, in themselves, have enabled a certain generalisations to be made.

Given the complexity of this study, with so many variables affecting the actors and the outcomes, it is inappropriate to approach the subject with a rigid set of pre-ordained theories. Rather the theories have emerged through the data gathering and analysis, this approach is seen as the most appropriate for the data gathering and analysis because the methods have enabled me to:-

- Make systematic comparisons throughout the enquiry
- Use the data, codes and categories iteratively
- Undertake analytic writing from the start
- Establish early links between the empirical world and theoretical ideas and testing them (Charmaz 2006)

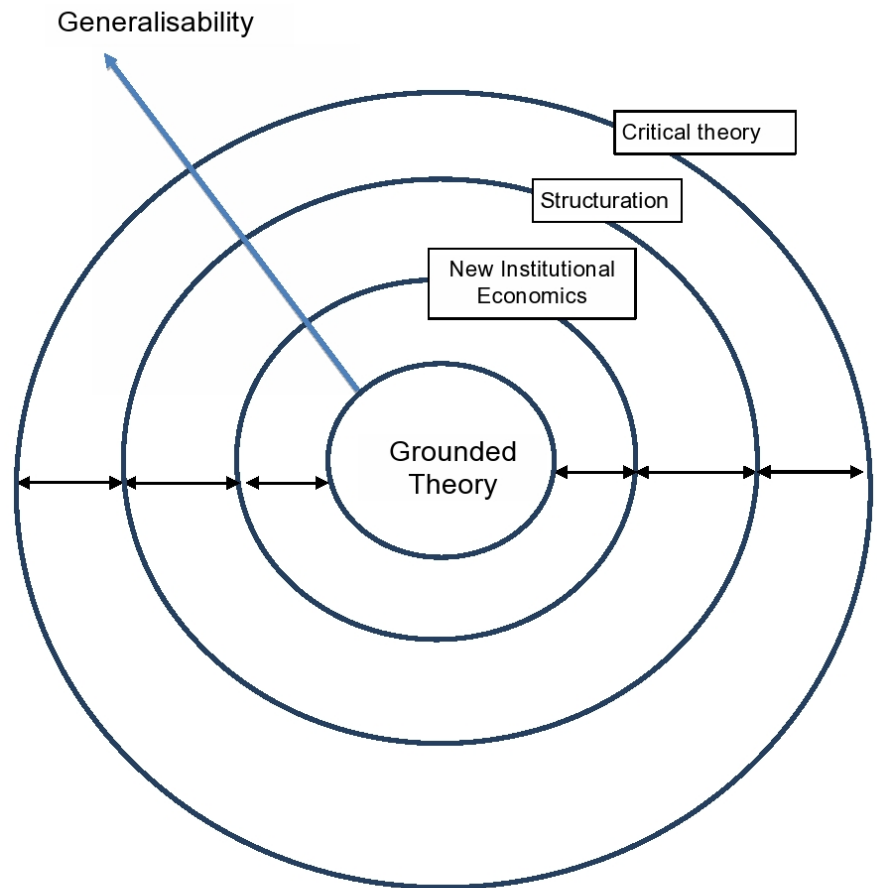
Miles and Huberman assert that (2002) qualitative data analysis is essentially about detection, and the tasks of defining, categorizing, theorising, explaining, exploring and mapping are fundamental to the analyst's role. All the data and each of the activities to

generate those data are essentially seeking to answer the same research questions, namely, how is policy formulated ? and how is this policy enacted on the ground?

The analysis of the data based upon GT provides the basis of an account which applies quite specifically to the findings in this case in particular. From a purist perspective, the 'Grounded' interpretation is quite specific to the context of this qualitative study and should not be generalized. Such a perspective is legitimate from the perspective of the features that are unique to this case, for example, the history and traditions of education in Bahrain, the political and social volatility in the wake of the Arab Spring. Any attempt to generalize on the basis of the relatively small number of interviews, conversations and focus group meetings should be approached with great caution. Nonetheless, elements emerge from the data that have a resonance both within broadly comparable socio-political settings ie. LDCs as post-colonial authoritarian states (for example in the Middle East and in Eastern European CIS countries) and within comparable contexts of acceptance models of technological and social change.

The relationship between Grounded Theory and the complementary theoretical frameworks is, therefore, a complex one. Figure 6 is designed to be a reflection of Figure 2. In the earlier figure, the interrelationship of the frameworks was shown to focus upon the particular interpretation that GT affords; in Figure 6 the intention is to show how careful analysis, iteration and coding, some generalisations can be posited. The figure overleaf shows a centrifugal impetus, where the GT interpretation of the data, can, where appropriate and justified, be seen to have a wider relevance more generally, when applied to similar contexts. The relationship is, in practice, an interplay at many levels between GT and the other theories, but, I would wish to suggest the broad direction of travel – in certain clear examples which will be identified – is from the specific to the general, by virtue of the broader theoretical frameworks. One clear example would be that of structure / agency dialectic – in this case the dialectic can be viewed in three examples – the tension between personal agency and theological determinism; the tension between central dirigiste control by a Ministry of Education and schools' putative autonomy; the tension between familiar routines and relationships and those imposed by over-rationalised systems of management and accountability and IT.

Figure 6) – The relationship between the theoretical frameworks - generalisability



4.5 Access and ethical considerations

Access to the schools and to the elite groups to be interviewed has been aided by my having lived and worked in the region for a number of years and by the nature of my work which has enabled me to have access to high level advisers, decision-makers and school leaders. The most significant consideration is one of openness and candour amongst the interviewees. In all cases the interviewees were reassured about the confidentiality of the process and the guaranteed anonymity of all contributors.

The over-riding ethical principle has been to “do no harm”. In this sort of ethnographic study, where one is engaging in close dialogue with subjects on matters related to many deeply held personal beliefs, a great deal of sensitivity is required. The research has involved serving teachers and school leaders, all of whom are currently employees of the Ministry of Education (MoE), so a careful consideration of the ethical issues is made so as not to compromise their employment status. The most overriding considerations have related to confidentiality and informed consent. Issues relating to confidentiality have already been highlighted, earlier in this chapter, in the context of the focus group interviews. As was stated earlier, all participants were assured of personal anonymity when they have been sharing their views openly and honestly. They were reassured, for example, that any negative comments could not be directly attributed to any individual. This is particularly apposite in the case of focus group discussions away from the school campus where, because of the relaxed informal setting, individuals were more inclined to be honest and forthright than in more formal interview settings.

Another powerful consideration has been one of cultural sensitivity. I, as the principal investigator, am of white European heritage, and the subjects have quite different social and cultural backgrounds – moreover, in the countries of the study, the local culture and heritage have been subject to European colonial rule for most of the last century. Notwithstanding, the context of the research which is looking, in part, at the nature of the reconciliation between traditional beliefs and customs and globalization / knowledge economy discourses, the presence of an interviewer who is “other” not only raises ethical questions but also questions of authenticity. With these considerations in mind, every effort has been made to involve colleagues and associates who are Arab nationals when data-gathering, particularly at school level.

The policy-making elites are individuals of a perceived higher social status than the interviewer and the risk has been that they may, as a consequence, have been responding in superficial and not fully-informative ways. On the other hand, they may have felt guarded in any responses which reflected negatively upon or contains implied criticism of their country's rulers. Clearly, confidentiality has been maintained at all times, and the interviewees have had the opportunity to see transcripts of their interviews. It is acknowledged (Dexter 2006) that this cadre of interviewees are amongst the hardest from which to derive an authentic and truthful voice. In all cases care has been taken not to identify any individuals or any names of schools, but rather to refer to them as examples of a case or a sub-set, such as "a boys secondary school, for Grades 10-12, in an urban setting"; or a "senior government official". The project was conducted within the BERA (2011) ethical guidelines for educational research and the writing undertaken in line with the Association's good practice in educational research writing. A Student Research Ethics Application was approved at the Institute of Education on the basis of the ethics clearance obtained from the Bahrain Teachers College of the University of Bahrain.

4.6 Conclusion

To create the overarching analytical model within which the research has been conceived, this chapter has taken complementary overlapping theoretical frameworks that address the dialectic of structure and agency from a critical perspective. The local social and cultural landscape has been considered and contrasted with the epistemological roots of the major SNO and their knowledge economy discourses. The narrative has sought to highlight how these roots in Enlightenment thinking have shifted latterly to accommodate a definition of education which is more clearly located within the theories of human capital formation, and the development of the idealised neoliberal citizen – one who is an autonomous educated thinker capable of developing the skills and attitudes to engender self-motivation and lifelong learning.

Through adopting a critical and qualitative ethnographic approach to the research, which is comparative, in its broadest sense, the intention has been to gain some strong insights into the lived experience of policy in contrast to the large scale positivist quantitative studies which are currently so prevalent in this field. Since as Alexander (2001) observed in his international comparison of primary education "what happens in the classroom is actually rather important". The approach is not, however, merely

restricted to the school settings but, through interviews with key decision makers and their advisers, it takes full account of the broader socio-political and cultural context, in a tradition which resonates with the work of the early practitioners in the field. As Kandel (1933):53 noted:-

“The [comparative] approach demands first an appreciation of the intangible, impalpable, spiritual and cultural forces which underline the education system; the forces and factors outside the school matter even more than what goes on inside it. Hence, the [comparative] study of education must be founded on an analysis of the social and political ideas which the school reflects, for the school epitomises these for transmission and progress”

Chapter 5

Thematic analysis of the Data

5.1 Introduction¹³

In order to address the research questions in the broadest context, and to let the data drive the discovery rather than to immediately contextualize the contributions of the participants around the actual research questions themselves, the analysis is framed within three broad themes. The interviews and focus group discussions provide an insight into the daily experience of practitioners tasked with enacting policy reforms in schools; a qualitative approach has been adopted. Semi-structured focus group meetings were held with senior school leaders, and these were supplemented with interviews with school principals and government officials and their advisers.

Over the course of the focus group discussions and the interviews with senior officers, three broad themes emerged, and it is within these themes that the contributions have been analysed and presented. The themes are as follows:

Organisational culture (policy-making and enactment, centralization vs. local leadership)

Technology (Putative benefits of technology in the classroom; Issues related to hardware, distribution and connectivity; Students driving and/or enduring teachers ICT use)

Tradition (Disaffected workforce/ initiative overload / poor morale; Pedagogic beliefs and expectations; Training / professional development / eReadiness in schools; Students' socio-economic backgrounds; the conservative social culture)

In the contemporary globalised environment of education policy making, the 'social imaginary' (Taylor 2004) is a helpful concept, especially in relation to educational technology, since it encapsulates the futuristic rhetoric of a modernist political agenda.

¹³ In an endeavour to protect the anonymity the two government ministers in this study, they are referred simply as MoE_t for the minister on the traditional, conservative wing of government; and MoE_p for the minister from the more progressive wing of the governing Khalifa family.

In the earlier chapters of this study evidence has been presented as to how policy makers in the past twenty years have increasingly begun to adopt the utopian and idealistic language of the global IT conglomerates in their policy discourse (Jensen and Lauritson, 2005). In the Middle East, the Microsoft Corporation has been active in helping to realise the policy ambitions contained within the policy statements of the World Bank (1998) which have consistently promoted the use of education technology as an essential component of successful reform projects, as outlined in Chapter 2. In their Partners in Learning bulletin (Microsoft 2008) Microsoft outlined how their partnership with the King Hamad School of the Future (KHSF) project led to the successful training of 10,000 teachers in the use of computers in the classroom.

“The success of the program has been demonstrated by how quickly it has been taken up by schools across Bahrain. In 2003, the program started with 11 schools, having selected one male school and one female school from each state. In 2004, 40 more schools joined the program, and in 2005 a further 30 schools joined. In 2006 the Ministry of Education decided that students should be taught computer skills from Grade 1 through to Grade 12, and the success of the program has given them the confidence that their goal - teaching all children in Bahrain ICT skills by 2008 - can be met”

As the narrative accompanying the interviews with school practitioners in this chapter will make clear, the actual realisation of the project aims, is far from secure. Most teachers and school leaders report only minimal use of education technology in Bahraini government schools. Nonetheless, the evident lack of IT utilisation in schools, as reported by the school practitioners, is not reflected in the policy rhetoric which the government projects on the international stage. Speaking at a UNESCO gathering in Paris (Al-Nuaimi 2011), the Minister of Education (MoE) stated that Bahrain had:

“succeeded in spreading e-learning through the pioneering King Hamad Schools for the Future project and is currently turning some of its curricula into electronic ones”

and, in a later speech (Al-Nuaimi 2012) the minister added:

“E-learning, which is being used on a large scale in our schools, contributes effectively today to improving schools’ performance and consolidating

communication between the parties involved in the teaching-learning process”

The extent to which this “social imaginary” (Taylor 2004) is reflected in the schools that have been tasked with realising the vision, is evident from the interviews and focus groups which make up the empirical part of this study. The gulf between policy making and policy enactment is not unique to the Middle East. Indeed, much of the ‘future schools’ rhetoric from across the globe suffers from the same remarkably uniform idealism which is underpinned by a belief in a relentless technological determinism (Zhao and Conway 2001). The particular features which are of interest to this study are firstly the yoking of the IT and eGovernment visions to a broader ‘knowledge economy’ discourse; and secondly, the policy enactment within educational and social settings in the Middle East where there are fundamental epistemological differences to a policy discourse which is a product of the neoliberal thinking of these ‘new times’ (Hall 1996). Nonetheless, despite cultural and traditional differences, as the extract from the KHSF launch (Appendix 4:227) makes clear (Eqab 2003), the ambition to realise wider educational objectives through the application of educational technology is embedded within the policy discourse. According to the launch document, the KHSF has wider significance beyond simply supplying schools with computers since: -

“It is a fundamental turning point from the traditional teaching-learning process to a future process based on technological employment.

It provides a learning environment for the students, teachers, administrative staff, and society that allows interaction at any given point.

It is an ideal solution to the demands of e-learning which covers a large number of users at once.

It is an educational model which contains teaching and learning tools, as well as tools of assessment.

It completely changes the limited resources of the traditional class environment to an open interactive motivated environment which improves the learning process, and helps benefit from various information resources.

It allows every student to learn according to their ability, at the same time taking into consideration the different learning abilities of the students.

It allows teachers to interact with students, and continually assess them individually.

It helps students to benefit various positive skills and values illustrated by:

Embodying cooperative learning

Developing assessment and building skills.

Developing artistic thinking

Reinforcing criticism and assessment skills

Reinforcing conversation skills

Developing students’ personality and enabling them to generate knowledge,

and not just be a recipient of it. It also enables students to be active members of an information society based on economic knowledge.”

The ambitious policy rhetoric contained within the project launch documents is a further example of a phenomenon referred in Chapter Two, namely the “magical properties” (Jensen and Lauritsen 2005) which policy makers attach to the new technologies in education, where more technology is equal to more learning. The purpose of this empirical part of the study, then, is to take these KHSF project ambitions and test the extent to which school practitioners are aware of them and the extent to which they are being realised in schools.

As, essentially, an ethnography this study has adopted a methodology based upon Grounded Theory for the analysis of the qualitative data of the first-hand interviews, the themes have emerged from the data. In the early stages of its conception, the study sought to discover the features and impediments of the government policy enactment solely related to education technology projects at a school level. However, in the course of the fieldwork, it became increasingly clear that the enactment of education technology policies in schools must be viewed in the light of the wide number of other policy initiatives which schools are required to address. The fieldwork demonstrated that, aside from the futuristic policy rhetoric of senior politicians, more recent and urgent policy initiatives and events on the ground have overtaken the original policy intent. These events have taken such prominence that the early ambitions of the KHSF initiative have been all-but forgotten. The immediacy and urgency of the current concerns have been so demanding that it has become apparent that the KHSF project no longer has a significant presence in the daily lives of school leaders; these concerns are evident in the contributions made by participants in the focus group discussions, detailed later in this chapter. As Stephen Ball has observed (1993), policy is subject to “ad hocery” and serendipity at both a macro (state) level as well as at the micro (school) level. Schools, through the necessity of self-preservation, must pick and choose which one, out of the many and several policy suites, to focus upon. Since there are no obvious performance targets relating to the KHSF project to which schools may be held accountable, the policy enactment of the message of ‘ICT across the curriculum’ has been of relatively low importance.

When considering the factors affecting the implementation of the KHSF project, whose early conception can be traced back to 2001 (Ministry-of-Education 2001), this

educational technology-related scheme must be viewed in the context of the subsequent school improvement initiatives (SIIs) which were proposed by consultants from McKinsey and Co from 2005 onwards. Commenting on the early ambitions of the KHSF a senior government adviser remarked to me:

“...the King came back from a trip to Jordan in 2003 where he had seen the Jordan Education Initiative, and told the Ministry of Education that he wanted something similar to happen in Bahrain”

Policy borrowing during periods of reform and education development is a commonplace activity (Steiner-Khamsi 2004), particular with regard to education technology policy. A project similar to the KHSF was launched in Dubai in 2005 entitled the Information Technology Education Project (ITEP). The legacy of this project in the United Arab Emirates now consists of a series of largely obsolete and redundant, purpose-built suites for education technology in most high schools, (DSIB 2009). In the case of ITEP, any meaningful integration of education technology into the school curriculum is almost completely absent. The successor to ITEP in Dubai, the 2012 Smart classroom Initiative, has been designed to achieve better technology integration with learning but it is a largely hardware-led programme – the initial phase of the initiative consists of distributing large numbers of iPad, tablet computers to the senior students in government education establishments. These are the common features of educational technology projects in many parts of the world where the capital spending on IT hardware and the political rhetoric have exceeded the education establishments' capacity to integrate education technology into schools' curricula and classrooms (Lightfoot 2012). In the Middle East and North Africa (MENA) region there are, at the present time, further complications, related to the continuing political upheavals and civil unrest.

The local Bahraini context

The regional social revolutions, known collectively as The Arab Spring, which led to regime change and the toppling of authoritarian governments in several countries in the northern part of the MENA region notably, Egypt, Tunisia and Libya, have had a significant impact on the context in which this study has taken place. Whilst, there has been no explicit regime change in the Gulf states, the governments of the GCC countries have been keen either to quash or to appease the rumbling dissent of their populations. In Bahrain, the long-running complaints about a democratic deficit

emanating from a population, the majority of whom are Shia Muslims, ruled by the extended Al Khalifa family, who are Sunni Muslims, led to a major confrontation in mid-February of 2011. This confrontation spread to become a major conflagration, and a month later on 15th March, a state of national emergency was declared. Civil laws were suspended, in parts of Bahrain night-time curfews were imposed, and a consignment of civil guard personnel from neighbouring Saudi Arabia was invited across the 25Km long causeway linking the two kingdoms to help maintain the peace in Bahrain. The state of emergency was repealed three months later, but the deep social and old sectarian divisions that were inflamed during the conflict have cast a long shadow over all the economic social reforms in the country. Most particularly, as a reflection of a growing Arab nationalism across the region, those reforms relating to education and social policy, which are seen to be mimetic of models from the Global North (DiMaggio and Powell 1983), have been downplayed. In schools, any notions of student-centred education within democratic classrooms enriched with technology enhancements have become secondary to the now strongly-reinforced traditional function of schools and teachers during times of civil unrest and disturbance, namely, the schools' role as an instrument of social control (Foucault 1979).

5.2 Data gathering and analysis

It is within the context outlined in the introduction that the focus group meetings with senior school leaders have taken place together with interviews with government education ministers and senior government policy advisers, both expatriate and Bahraini. The triangulation of evidence has been completed through visits both to boys and girls schools at elementary, intermediate and secondary phases during which interviews with the schools principals on their school premises took place. The interviews were conducted predominantly in English, with a bilingual colleague in attendance to translate as necessary. In those schools where the principals were not fluent or were uncomfortable speaking in English, the interviews were conducted in Arabic and the key points from the interviews translated into English, for transcription and analysis.

5.2.1 Organisational culture

The earlier sections of this study have sought to show how the projection of Western models of social organisation upon traditional Arabic societies is highly problematic. The review of literature has pointed to the divergence of epistemologies from around

the end of the Twelfth Century between the Occident and the Orient. For the peoples of the Arabian Peninsula, which have been subject to colonial administrations for more than 500 years, and where the historic traditions of tribalism are strongly evident (Al-Jabri 2006), there is not a culture or tradition of democratic accountability. The countries of the Peninsula, which only emerged in the latter part of the Twentieth Century after these several hundred years of colonial domination, have, since their establishment, been governed by authoritarian hegemonic rule. The Gulf states, in recent years, have sought to redress their economic dependency on hydrocarbon abstraction by the formulation of a human abstraction in the form of the putative development of the intellectual capital of their populations, in recognition that the oil-wealth that these states have enjoyed is finite.

In several of the countries which comprise the GCC, large American consultancy companies have been engaged to formulate government policies designed to align the economies of these states, which have only relatively small indigenous populations, with the global imperatives implicit in the knowledge economy narrative. For example, in Saudi Arabia, Booz and Co have been very active in social policy formulation; in Qatar, The Rand Corporation were engaged to modernise the education and economic policies, whereas in Bahrain, McKinsey and Co were retained from 2002 to formulate the economic and social policies leading to the long-term national aspirations contained in the Vision 2030 document (Economic_Development_Board 2005). Although each of these Gulf country's policy formulations has been distinctive and localised in its own way, all the policy suites have, in common, a view of human condition, the nature of society and the nature of government which are countercultural to the complex, conservative, tribal and theocratic regimes of the region.

In his detailed ethnography of social reform projects in Saudi Arabia, Stephen Hertog (2010) recounts how policy initiatives are seldom well-articulated in any coherent fashion and the policy impacts almost never evaluated. Rather, from his experience, each project is seen as the personal prize of a particular member of a – somewhat extended – royal family. The projects operate under the personal patronage of various princes and the projects' success and effectiveness are seen as only secondary to the amount of resources that they can be seen to have at their disposal. In a similar fashion the reform projects in Bahrain have been strongly identified as being under the personal patronage of the Crown Prince. The Crown Prince being conceived and heralded as a patron of reform and modernism in contrast to his great uncle, the Prime

Minister, of over 40 years standing, who represents tradition and continuity. The events of February and March 2011 proved to be pivotal in terms of the power relations between the different members of the ruling Al Khalifa family. The Crown Prince, who had been personally involved in the ultimately fruitless negotiations with the, mainly Shia Muslim, dissenting sections within the Kingdom, eventually was forced to cede to the demands of the conservative establishment leading to his father, the King, suspending the constitution, and inviting the Saudi forces into Bahrain to assist in the quelling of the social unrest. Although the period of national emergency was relatively short-lived, the constitution being restored after just three months, the effects of the civil strife upon the reform movements have been profound. This is not to say that the reforms had been progressing smoothly and effectively before the troubles, the comments from many of the interviewees would indicate that they had not; rather, the current situation has created a further brake on progress, in the eyes of the reformers or a period of calm and consolidation in the eyes of the traditionalists.

false memories and “fuzzy traces”

The regional turbulence in early 2011 had a significant effect upon the functioning of schools in Bahrain. School leaders had to contain groups of young people who had witnessed the seismic forces of social change having their impact elsewhere in the Arabian Peninsula and were frustrated that similar changes were not evident in Bahrain. The social disharmony and conflicts within schools are reflected in the contributions of many of the school leaders taking part in the research. In one sense several interviewees speak of a past which was happier and more harmonious than the present, but it is not completely clear whether this, somewhat idealised, past is about a time prior to the current education reforms (from 2008) or in relation to the most recent civil strife (after 2011). Parts of respondents' comments could be regarded as false memories, or a “fuzzy traces” (Brainerd and Reyna 2002) or, they could, as Davis has argued (1979), be interpreted as nostalgia acting as a collective memory which is a reaction to disruptive, anxiety-producing events, and acts to restore a sense of continuity across ruptures.

Regardless of which ‘past’ the interviewees are remembering, they find themselves, at the time of this investigation, as policy actors caught between a conservative state establishment and a reformist agenda, the democratic underpinnings of which are

currently unrealisable. A senior government adviser comments, with regard to democratic accountability, as follows:

“.....if you go to a country that is democratic and elected, then it is elected on a manifesto and it is that manifesto which has emerged from a very clear vision and an attendant policy framework that comes from that; there isn't that here”

and with regard to policy making:

“There is no discipline around policy making – the policy agenda is whatever happens to be in the Minister's in-tray - there are procedures but not policies. There is a strategic planning thing, which does have some strategic thinking, but it's not joined up there is not a kind of national agenda around education. There is a huge reluctance to integrate. You get actions – you get initiatives but no policies to underpin this. There are no overarching policies; so you ask for a policy on class sizes, there wouldn't be one – you ask for a policy on teacher recruitment, there wouldn't be one. They wouldn't have a policy which was based upon current need, or on forecasting trends – so there is no serious thinking around this which leads to sensible policy making”¹⁴

accountability, policy making and idealistic rhetoric

Yet a senior under-secretary at the Ministry of Education (MoE_p), from the progressive and reform-minded wing of the ruling family, continues to project a quasi-democratic, participatory, view of education in this way:

“Education is not just one side – it's the school, the government the parents and they all come together to create an education system. Where you have a good education system all three come together and work together – not working without problems, but working together versus ambiguity”¹⁵

This somewhat idealised view of the education system is not reflected in the experiences of many teachers who characterise their position as working with a Ministry of Education which is highly centralised and controlling; as, for example, a senior leader from a boys secondary school remarks:

¹⁴ expatriate government advisor

¹⁵ government minister

“.....something very important is that the teachers are not involved in taking their opinions; they are not asked; they are forced to apply these things. They used to do this in the past, when they get their training to ask their opinions but now – No. – there was a relationship between the teachers and the students and the leadership, but now this connection is not there. They are now just receiving commands from the Ministry of Education and having to do things; and for the teachers to take the responsibility on their shoulders”¹⁶

The senior school leader here is clearly voicing his frustration at the lack of consultation and responsiveness from the Ministry. A government adviser indicates his frustration at a process which he saw as beginning to have an impact, albeit in a rather fragmentary way, but which is now somewhat becalmed:

“One of the biggest challenges at the Economic Development Board is that we could do things, we could do things and we have created some momentum around many of these things – but one thing we have failed to do is to have any form of integration between the various pieces of education reform; there is a huge reluctance to be integrated in any way – people work in silos.”¹⁷

atomisation

The theme of atomised policy making and poorly integrated operations at the Ministry of Education is reflected in the comments of a senior leader from a girls secondary school:

“.....yes in the departments of the MoE everybody works alone; separately. They have their own work; they do their projects and no links between what they are doing; every department they have their own vision, they have their own projects; they want to show that they are the best and nobody knows about everybody else and what they are doing”¹⁸

overload and innovation fatigue

A recurrent theme in the interviews is one of initiative overload, teachers being expected to implement several different projects at the same time, with newer policy

¹⁶ senior school leader, boys secondary school

¹⁷ expatriate government adviser

¹⁸ senior leader, girls secondary school

initiatives taking precedence over older longer-established ones. In the consciousness of most school practitioners, the school improvement initiatives (SIIIs), (see Appendix 2:40) dating from the era of the McKinsey consultancy have taken precedence over the earlier KHSF policy aspirations such that, in the words of a senior leader from a girls primary school, whose views echo those of many colleagues:

“.....it’s not clear to the teachers either what is the connection between the KHSF and the school improvement initiative (SIIIs). The SIIIs do not link with the other initiatives. I’ll give you an example – the strategic planning tool is an online tool, but it’s very hard and small and people find it hard to use; so people would transfer it to Excel and Word to work on it. But this is not useful because then someone from outside can’t see our work..... I think we are still struggling in applying ICT to teaching and learning”¹⁹

This is not an unusual situation for teachers working in late modernity, or new times (Hall 1996). For example, in their investigation of *How Schools Do Policy*, Stephen Ball and colleagues report a similar situation facing teachers and school leaders in England (2012). In Bahrain, school leaders voice their unease at the extent to which teachers’ concerns for students, their welfare and progress have often become secondary to their need to be seen to be documenting their implementation of a project or initiative, as follows, in the words of a senior leader from a girls secondary school:

“.....No. The teachers’ demands have changed – it is now ‘how do I do these duties?’ it is not any more ‘how do I teach my students?’ And this is what we lose in our schools – teacher concerns, they used to think about his students BUT now he is overloaded with these projects, he wants to document his work. He thinks about things which are new priorities. They have the belief of the new strategy; but their problem is “give us the time: take the load from our shoulders” they are not refusing they are not saying they will not do it”²⁰

Similar sentiments are evident in the comments from a colleague at a boys secondary school:

¹⁹ senior leader, girls elementary/primary school
²⁰ senior leader, girls secondary school

“..... what we mean be loads on the teachers (sic) - they are targeted from different directions at the same time; no time just to think; they are very exhausted, and then we expect them to do all these things without complaint. So this is a very important point, there is no connection between all the different sites and directorates. You can't imagine the number of projects. The ministry ask the schools to projects, to do activities and all these will be done by teachers. So the school distribute these projects to the teachers; so the teachers have to prepare, to teach, to do ICT and to do projects for the MoE as well.”²¹

performativity

Performativity is a feature of life in what Lyotard has called the Post-modern Condition (1984). In his Report on Knowledge (ibid) Lyotard questioned how we define knowledge in a post-industrial society. He believes that the traditional methods of legitimizing science and learning become obsolete when viewed from a post-modern perspective; proof, he contends, is established in post-modern science through the funding of self-referential research by key agencies (often SNOs), which then increases efficiency or ‘performance improvement,’ which allows more ‘proof’ to be produced, which, as an end in itself, becomes a type of legitimation. This is performativity. Education, by contrast, ceases to be an end in itself for young people at the university level – instead, in an age of lifelong learning, members of society will need to continually absorb new information in order to be able to function in an ever-evolving system. The role of professor as transmitter of learning may decrease, as computer-based learning opportunities increase.

Those working in the education sector, in common with many public services during these neoliberal reformist times, are in the process of having their professionalism recast in this reformed mould. Stephen Ball has defined performativity in relation to teaching as a “mode of regulation that employs judgements, comparisons and displays as means of incentive control attrition and change” (2003):216 . The teachers in the focus groups spoke of their frustrations at being asked to implement new policy initiatives from the MoE that were counter to their instincts as teachers and which they felt were not always in the best interests of their students. This requirement for educators to play the role of a teacher, as a compliant agent of government policy, rather than as an intrinsically-motivated professional whose primary motivations are

²¹ senior leader, girls secondary school

related to children' welfare and progress, is a particular alien construct amongst educators. Ball (ibid) talks of the 'terrors of performativity' and Bourke et al. (2013) in their recent research into teachers in Australia. Here there is evident a degree of deep resentment amongst many teachers to the recasting of the profession as one where they are judged only through measurable performance goals. Avis (2005) claims that teachers' own conceptualisations of good practice outside the realm of standardised testing and other performance measures have been, as a consequence, silenced and denied legitimacy.

The chasing of targets and objectives which often do not have a direct bearing on the students' welfare or their broader personal development is a reflection of the existence of a bureaucracy which is more concerned with social control and an outward appearance of measurable success than through promoting educational relevance and excellence (Callaway 1993). Several practices serve to reinforce this highly centralised control over the school system, as a senior government adviser observes:

*"I asked the Minister what is the policy on school principal tenure – there is no policy. The average tenure of a school principal is 9-18 months, yet all the research shows that school principals are only effective after about 5 years; but they (the MoE) don't want to do it. They use the principal deployment as a system of rewards and punishments – if a principal upsets the minister that principal is sent to a really tough school as punishment; it's also used for dealing with sectarian issues; it's used for all sorts of reasons far-removed from school improvement. There is no policy. This is the way that the MoE controls its schools"*²²

Schools are asked to take part in projects and initiatives and if they do not comply, unfortunate consequences will ensue. A boys secondary school principal remarks:

*"..... they have their benefits for their projects – they will gain something out of this, so in order to achieve some objectives they force us to cooperate – 'if you do not cooperate, you are not good' next time you will be OUT. This is the MoE. Very tough"*²³

²² expatriate government adviser

²³ boys primary school principal

This school leader had been redeployed from a boys secondary school, where he had worked for most of his career, to a boys primary school, continues as follows:

“.....I am now two years at a boys primary school and it is big change for me...I was 20 years in boys secondary school, the biggest school in Bahrain. It is a big change for me personally but I have had to learn many new things.”²⁴

Yet the significant distance between policy making legislature (partially progressive in outlook) and the executive (largely conservative in practice) arms of government is evident in the comments of an under-secretary of state at the Ministry of Education (MoE_p):

“.....The notion of getting teachers to do more, to be more responsible has always been there in our culture and in our literature, but not in our practice because: a) the teacher was all knowing ..and the students were not-so knowing (in fact the teacher really was all knowing); but then things have changed where the teacher has remained all knowing even when they weren't all knowing. So we had to go through this process of changing the mind-set of the MoE and it was very painful; people were kind of scared to lose authority and scared of failing; they needed reassurance and they needed someone to say – it's OK to make mistakes, because then you can learn from those mistakes ...erm..... but it also took a change in the upper leadership of the MoE”²⁵

The no-blame culture about which this senior minister is speaking is not evident in the statements made by school practitioners and policy advisers. Most school leaders interviewed have stated that they feel to be under constant pressure to perform and succeed by the officials from the Ministry of Education. It is, according to most of the interviewees, these very officials who have been so reluctant and slow to embrace the reforms, yet MoE_p continues to project an image which portrays the MoE leaders as promoting the reforms by their own example:

“.....when the leaders want to change and embrace change, then everyone else says it is OK to change – but if you expect the teachers to change when no one else is changing, they ask the question why do I need to change if he is not changing”.

²⁴ boys primary school teacher

²⁵ government minister

In respect of the policy sources, government ministers are happy to associate themselves with those countries from whence policy advisers have encouraged the government of Bahrain to seek ideas and policy models. The small island state of Singapore has been a rich source for policy-borrowing that has driven many of the reform initiatives, but it is claimed that any such policies from abroad have been localised to reflect the context of this Gulf Arab state; in the words of MoE_p:

“.....yes we started off with a Singaporean model, yes we’ve had mentors from the UK from Australia and from here and there; but then it’s just your idea and I can challenge your idea and come up with a hybrid idea it’s something that can work because I can bring the Bahraini context to it – so mentors have been with the chiefs and senior chiefs and I think they are in the MOE and they are doing a great thing in pushing the reform agenda. So I don’ t necessarily subscribe to the view that it is eastern or western – I think it is a Bahraini model which certainly is influenced by Singapore and from other experience from the mentors from UK and Australia etc.”²⁶

Whilst in parts of the MoE there may be a perception that the organisational models of the education system and the proposed professional practice of the teachers have been modified to reflect the local circumstances, the teachers and school leaders do not sense that this is so, as a senior leader from a boys primary school comments in relation to the importation of performative education models from South East Asia:

“the MoE is always trying to bring the best ideas from other systems like Singapore or Japan or British. OK you should just see if it is available and right for us to do here. Always they say to us “ it has succeeded in Singapore so it should succeed here” it shouldn’t succeed here because here is different. I think they are looking on the Singapore they want to follow without any foundation for that. And another thing that you want to implement in your school, but there is no time even to take breath to try and implement in your school. This is our problem everything is new – you are studying something then something new is coming like that so you don’t have time to follow what they want.”

²⁶ government minister

It is, then in the context of this complex suite of policies, often emanating from alien cultures and traditions, that the educational technology policies are expected to be enacted.

5.2.2 Technology

Amongst all of the school practitioners who took part in this study, there was a high degree of consistency in their views about how little impact the KHSF project has had upon the teaching and learning in their schools. Moreover, given the large number of newer and more pressing initiatives that have arisen as part of the reform agenda from 2008, the KHSF is now seen by many to have become little more than a hardware distribution operation. Despite more than two decades of research which has indicated the absence of any direct causal link between the investment in education technology and improved learning outcomes (Dede 1995, Means and Olson 1995, Law, Pelgrum et al. 2008), the policy statements from a senior figure in government still comment upon his understanding of the strong relationship between ICT and the quality of learning, in the words of the MoE_p:

“... (the) Mckinsey diagnostic study indicated that IT is one of the key drivers of reform”...if ICT is not embedded, so the teaching is not up to scratch. Today, having wifi access is changing from a luxury item to a necessity- for example – a mobile phone is a necessity now. After a year or two we realized that one electronic classroom was not the way forward, we realized that this was not the way to go – so we now have a policy that every space is an eClassroom and every space must usable with ICT . All of our schools are now capable of handling IT. This is the new way we are going – using computer in every classroom with our new idea of using mobile tools in every classroom can be a challenge;but IT is not a goal in its own right; it is a tool and a mechanism to help us achieve a different, a better educational outcome. Always the focus is on the student and everything needs to revolve around him or her.”²⁷

This political rhetoric does little to recognize that the relationship between technology and classroom usage has always been a complex one. Sutherland et al. (2004) highlighted the small amount of research which had taken place at that time about the relationship between educational technology, classroom practice and learning

²⁷ government minister

outcomes. Warschaueur and Matuchniak (2010) in their detailed analysis of educational technology investment in the schools in the USA and the impact upon student learning outcomes, have shown that no clear-cut causal link exists between educational technology investment and improved educational performance, indeed their analysis confirms that socio-economic status (SES) has a far higher significance than connectivity and how many computers are in the classroom – even when equipment is available to students on a one to one basis. This research is consistent with the findings of an analysis of the 2004 PISA results (OECD 2006). Some small student overall performance gain is evident in high SES schools, but these gains are almost completely absent from low SES schools, where other social and educational factors are of much more significance.

Despite a growing body of international evidence which shows the complexity and absence of any discernable direct causal link between educational technology investment and improved learning, significant investments continue to be made which promote the benefits of ICT in education. Selwyn (2010) and others, such as, Apple (2004) Cuban (2001) and Monahan (2005) have commented on how idiosyncratic and dependent upon local conditions is the successful implementation of educational reforms related to technology. Moreover, a recent UNESCO survey (Stamboliyska 2013) acknowledges the small impact that ICT investment has had on education in the Middle East.

The focus group participants and the school leaders who were interviewed confirmed how partial and incomplete the educational technology implementation remains in the Bahrain school communities which have been sampled here. For the most part the KHSF project has been promoted through government representatives' presentations at international fora as a far-sighted ambitious programme to transform the nature of schools and learning whereas, in practice, the initiative has been a hardware-led implementation with the attendant training and professional development lagging somewhat behind the distribution of equipment. Indeed, in many cases, the professional development associated with the implementation of educational technology is almost completely absent. It is hard even to discern a rationale for the distribution of equipment. The original project vision was to focus on secondary schools as the prime drivers of the project, yet the actual implementation model seen most frequently in schools is one where most primary classrooms in Grades 1-3 have interactive electronic whiteboards installed, with a few portable data projectors available for the

remaining primary grades up to Grade 6. Even so, the poorer schools in the 'villages' - a convenient catch-all definition for low socio-economic status (SES) communities which includes the inner-city Shia communities - there has been only poor distribution even of IWBs and datashow projectors at both elementary and senior schools.

As a senior leader from a girls secondary school commented:

"ICT is not involved in innovative teaching and learning as it should be. The project started seven years ago, but until now.....Yeah it's a good thing we're happy that the ICT will be implemented in schools; the King's project of ICT in schools – we heard there would be computer, classes would be equipped with laptops, datashows and everything...err... but it seems that the project is staggering. After seven years they only started last month – I am talking about secondary schools – only last month started installing datashows in some classes – but even old. But still the whiteboards are normal whiteboards. The problem is not only with the project directors....this is the way I see it: at school we have teachers who have their own comfort zone and are very happy with their traditional, their conventional way of teaching and they don't want to change, they actually refrain from implementing new things. At our school we have only one eClass for the whole school..... After 7 years you wouldn't imagine that there would be a school which didn't have datashows, Smart or Active boards in eClasses – All the classes should be eClasses".²⁸

And another senior leader from a boys school, comparing boys secondary schools with boys primary schools

".....before, in the boys secondary school, there were 1,800 students and just one eClassroom so for the teachers it is limiting all they can do is take their laptop and use a datashow. But in the primary school it is different, the boys they just want to take from the teacher, but how can the teacher tell them if he does not know. Also in my school it is expired, it was built in 1964 and there is only one lab for technology and just last year they came and fixed an Activeboard for First level only – but the older boys they don't have anything enough, they cannot work with technology we have 12 classrooms but only six datashows"²⁹

²⁸ senior leader, girls secondary school

²⁹ senior leader, boys primary

The quotations above indicate how the early hopes of the KHSF project are now viewed somewhat cynically by school practitioners, who note that even the hardware distribution aspect of the project is now faltering, with no clear rationale about hardware distribution. A further recurring problem when using technology in the classroom is the lack of technical support, resulting in large numbers of machines which are malfunctioning or obsolete as a principal from a primary boys school commented:

“...the problem is that there are no technicians in the eClasses. Most computers are virused – there are far too many viruses that and you cannot use them they are not in a condition you can apply for a special project”³⁰

and this sentiment is echoed by a colleague at a girls senior secondary school:

“.....the virus was spread in our school and it went to every computer. I think in our school we have very very old computers; we have two computer labs for the students. When you enter the labs you will see the very old computers, the very big ones – and I ask the teacher “how many computers” she said maybe there are 25, but only 10 of them are working –she used to keep her students in groups so that several of them can work on the each computer – so I said to her, why don’t you write a letter to the Ministry and ask them to replace – she said I am tired of this; I have been writing the same thing for maybe 5 years, and every year nothing happens; at the beginning of the year we are writing the letter to the MoE but nothing comes..”³¹

It is evident that network maintenance and integrity is a major issue, but also the distribution of insufficient hardware prevents any meaningful integration with teaching and learning on a regular basis, as one senior teacher commented from a girls secondary school:

“....and at the beginning of Future School they were saying to us that each teacher would have a laptop, but actually this didn’t happen; because they would get maybe 20 laptops to be there. And then all of these laptops will be spread amongst the departments and they not have enough, so, for example, in the English department they will have one for the senior teacher. I remember when I was in my school in

³⁰ principal, boys primary school

³¹ senior leader, girls secondary school

*my department there were 10 of us and only one laptop; so if you wanted to design an eLesson it would have to be on your own laptop. And the datashow we don't have enough datashows only perhaps 6 or 7 for the whole school and the teachers will be fighting "who will be the first" yes because you know because the equipment is not enough for the teachers"*³²

pedagogic ownership and curriculum integration

Despite these limitations in a few schools it is evident that some significant high-level teaching and learning i.e. work that goes beyond simply PowerPoint presentations on interactive whiteboards (IWBs), does take place driven by the interest, personal commitment and expertise of a few enthusiastic teachers. This demonstrates a commonality with many early-stage educational technology implementation programmes such as Neil Selwyn (2006) describes in a UK setting and Warschauer (2004) outlines in relation to a USAID project in Egypt where, quite independently of the project, a few teachers had successfully taken some ownership and exercised some pedagogic ownership. From the focus group interviews, two senior school leaders from girls schools were able to describe how skilful teachers were able to weave the use of technology into their lessons only where it was useful and with the learning rather than the technology dominating proceedings, these are rare examples of pedagogic integration:

*"I have an example of a teacher using student-centred teaching and learning – she is a math teacher and she don't need to use ICT in her lessons because she is designing and doing her plan on this lesson on 'Students learning doing the collaborating and the learning'– each group has one task, they know what they must do and roles are assigned to each group member; there is some connection between the groups and the teacher was only just supporting in this lesson, without the use of the ICT at all he used only the stopwatch on the Smartboard. You can see obviously the students are learning and they are collaborating they are criticizing themselves and they are giving the feedback to each other – so it's clear that there is student centred learning happening."*³³

And another teacher:

³² senior teacher, girls secondary school

³³ senior leader, girls intermediate school

“ I have three teachers in geography, they are wonderful, they just have collaborative learning very effectively – she just handles the class smoothly; students know what to do, when to start when to stop; they use ICT as a starter at the beginning – they have some interesting games just to engage and stimulate the students, then they work in a cooperative way it is wonderful”

By contrast, in most school leaders’ experience the technology implementation in their schools has less to do with enhancing the learning, and more to do with easing the burden on teachers, a school leader commented on her own daughter’s experience:

“.....one day my daughter came home from school and she said ‘that’s it I don’t want to attend eClasses because nobody is explaining anything; in every class everyone is putting on a presentation and they are just reading, so nothing is developed in the student they are not gaining anything”³⁴

and a senior leader from a girls intermediate school said:

“.....some teachers will depend on the students because they know the students are very good at ICT and they will do a very good and beautiful presentation – so the teacher will divide amongst the pupils and say ‘ you do for me chapter 1, you do for me chapter 2 and so on....’ And I will record for you this project and give you good marks. The students will be very happy and they will show their friends”³⁵

Where teachers have their own personal confidence with technology, those who may be defined as the “early adopters” (Rogers 1995), and they are located in schools where the educational technology infrastructure and technical support is capable of sustaining and developing exploration and learning some genuine innovation and sharing is taking place, as for example in this boys secondary school:-

“With the support and help of one of the math teachers they have found a site on math and now, through the whole kingdom, the students are very wide sites for maths and now they are starting to move and work towards other subjects and help. Students are sharing and materials from the students’ point of view, some teachers help them, but now students are working on sites for the school itself. So we have

³⁴ senior leader, girls secondary school

³⁵ senior leader, girls intermediate school

got some talents in the schools but they need guidance – and they are now very famous amongst the students in Bahrain”

And this from another boys secondary school:

“There is a small number of students at my school who are making sites, yes websites, but it is a small number, it is not enough; they are making eLessons for the library, for example, and they collect these lessons and many things, not just PowerPoint”³⁶

These examples are, though, rather few and far between. Moreover, for these students’ work to be appreciated more widely in the Kingdom there are many issues to do with hardware availability and currency which prevent them from having any significant impact upon most students’ school experience.

Personal initiatives

In the discussions, there were occasional examples cited of teachers taking their own initiative and using the technology in an interactive and student-centred way but these initiatives were often seen as risky and potentially destabilising to school leaders who are nervous of their responsibilities and live in trepidation of the Ministry of Education officials. As one senior colleague from a girls secondary school commented:

“We had one teacher with the old principal (the principal who was more open to new ideas and taking responsibility locally); this principal she used to encourage people to do things ... to use ICT with any strategy, just to use it and she used to encourage and motivate them to do different things. So three years ago we had this teacher of math, and she had a site (a website) and she used to put her homework up on the site..some exercises, even some explanation on how to apply the rules and the ratios she has been talking about in class; then we get this new principal and she heard the students saying and talking to each other like ‘the homework is on the site; go to the site’ and then principal heard this and made a fuss – ‘why didn’t you get permission to this?’ why didn’t you write to the MoE? – the teacher said, it has been here for three years now, but the principal said NO you cannot to this. In fact the principal used to be a technology teacher...she is open-minded

³⁶ senior leader, boys secondary school

*when it comes to technology. Her only fear is when it comes to the MoE. But when she heard it had been going for 3 years, she became more relaxed; so she said well if you have anything, a link or something to the site, well show me first. I don't want the MoE coming to me one day and asking me about it, and I don't know"*³⁷

From the focus groups and the conversations with school principals it has become clear that integrated implementation is relatively rare, and most of the professional development activities provided by the Ministry of Education consist of little more than functional operant training on using the interactive whiteboard technology, with little reference to the utility and pedagogical relationship of the technology at the school, as a senior leader from a boys primary school commented:

*".....when I attended a workshop by the specialist to teach the new features of the Smartboard, it's only about the teachers, it's not about student engagement so showing a teacher all these things....it is nothing at all to do with helping students be more engaged in teaching and learning – in the training, the idea of how to engage the students with the learning process ..this is missing.... So when you go inside the classroom you will see no change – you will see sometimes a teacher will be getting students to do something with the internet and others will maybe do some things with books but the majority of teacher maybe 80% will sit in the comfort zone and not do anything – maybe a few you will see them making a change inside their classroom but mostly it is nothing."*³⁸

Moreover, in the absence of a coherent and planned technology implementation strategy, including a hardware repair and planned renewal policy, across all areas of the Ministry and the schools' work, as the project has progressed the equipment in the early-adopter schools is rapidly becoming obsolete. The issue of obsolescence of equipment is not, however confined to schools in the Ministry itself, one teacher, who had been seconded to the Ministry for a period, commented:

"I was in the curriculum department at the MoE but I was shocked; in the MoE you would expect to get everything the newest. I went to my office, it was a very old one, I have a very old computer on my office.... really it was like this, because when you think of the curriculum department they will be having the newest version of

³⁷ senior leader, girls secondary school

³⁸ senior leader, boys primary school

*everything because they will be doing the research and doing a very hard job – but no, they have everything old fashioned and it is still the problem with the MoE – they are still using floppy disk. Really they are still using floppy disk.”*³⁹

Despite the difficulties of keeping the equipment up to date for curriculum purposes, there has been a strong emphasis in the use of technology for surveillance and monitoring purposes, as a boys primary school principal observes:

*“..... Our school only entered the KHSF program this year (2012). There is currently no internet in the classroom and no Smartboard or datashows. I have worked hard to get the staff to use ICT, with some success for a few; but it is hard because all our computers are old and slow. We use ICT extensively for administration, all the staff fingerprint in and out. We have an SMS system to contact parents. There is an electronic performance evaluation system which must be completed online”*⁴⁰

The use of fingerprint recognition technology for staff to “sign in and out” of their places of work is now widespread across all government departments and agencies in the Kingdom. This somewhat limited and administrative application of technology is probably the only example across most MoE schools where there is regular and planned use of technology – for surveillance . Additionally, thanks to assistance from the mobile telephone companies, the use of communications technology to broadcast text messages to parents via their cell phones is also widespread, though it is implemented on a school by school basis, and it is not universal. Moreover the use of closed circuit television (CCTV) surveillance cameras to aid the security in government schools is now commonplace, as, indeed, it is for the surveillance of the participants in street protests in the Kingdom. A great many teachers were suspended from their jobs at government schools, during the period of the constitutional emergency in the early summer of 2011, as their political and social allegiances were suspected to be subversive. Evidence for the suspension of these many hundreds of teachers and other government employees was gained through the scrutiny of CCTV images from footage and face recognition technology used by the police and civil authorities at anti-government demonstrations and rallies.

³⁹ senior teacher, girls secondary school

⁴⁰ principal, boys primary school

As in other areas of professional endeavour, the performative and surveillance elements of their work (Olssen 2004) have become of primary importance to the schools, and, as a consequence, these represent the only areas where functional integration of IT is taking place.

5.2.3 Tradition

In this chapter it has already been noted that the complexities of technology integration in schools is consistently underestimated by policy makers (Cuban 2001). It is far easier to acquire hardware and install the basic technology infrastructure than it is to wean teachers away from forms of pedagogy which have become their normal modus operandi. From the data gathered from senior school practitioners in Bahrain it is evident that the anticipated professional development to accompany the technology seldom materialised.

*“....when the project started in 2005 we were told that the professional company would come and program all this syllabus and curriculum. They (MoE) saw all these details they thought it was very expensive so the teachers had to cope. We need support from the MoE, **REAL** support from a specialist to integrate these technologies. The teachers just need some basic tools they can use and modify the lessons on accordance with the needs in the classroom – we can’t just tell them “design a lesson”⁴¹*

What limited amount of professional development that has taken place has been largely restricted to functional training on using IWBs, as noted earlier. There have, moreover, been few opportunities for teachers to adapt and augment their professional practices through the application of educational technology. In the words of a senior leader from a girls secondary school:

“.....but up until now the curriculum is connected to ICT, but only in a very simple way, such as access to the internet or using MS Word ; but there are no lesson plans or designs in using ICT – only the sources and resources that students can go and see on the internet and see some other things; so we rely on personal

⁴¹ senior leader, boys secondary school

initiatives – if the person (the individual teacher) is willing to do this, then they will work, but it is very difficult and they have many obstacles to overcome”⁴²

Underlying the future-oriented policy making aimed at a putative knowledge-laden future there are a number of serious and significant social and economic factors which militate against social change. The most serious issue is the staffing and the competence of the teachers, particularly in the boys schools because of the cultural, economic and social issues discussed below. The school evaluation reports from the SRU of the QAAET consistently point to the inadequacies of boys schools, leading to a large and growing disparity between boys and girls academic achievement. An analysis of the reports (QAAET 2012) shows that where boys have been taught by women in primary schools, their achievement is better than those boys who have been taught by men in male-staffed primary schools. Cultural and historic traditions forbid women from teaching boys over the age of 10. Consequently all the boys intermediate and secondary schools, for boys between the ages of 11 and 18 are staffed exclusively by men. For men, teaching as a profession has relatively low status in Gulf Arab societies; salaries are low and few local men are attracted to teaching, apart from those men who are teaching the compulsory Islamic studies curriculum. This means that the boys schools must rely heavily on the recruitment of expatriate teachers from the poorer Arab countries for their teaching staff, such as Egypt, Jordan and Syria. These staff are paid less than the local teachers, and there is no incremental progression along a pay scale; as one principal of a boys primary school confided:

“...there are a few issues I wish to shed a light on, maybe I shouldn't say but to confront the truth..... in each school there is a considerable number of expatriate teachers – for example in my school 70% of the teachers are non-Bahraini – if you talk to them friendly and open the will tell you exactly what they feel; they will, for example tell you that the salary they received, there is no change – so if you are working 20 years, it is just the same; whereas a newly-appointed Bahraini teacher maybe doubles his salary in 10 years. I have been working here for 25 years and I am still earning just the same. So if you ask an expat teacher to innovate he will not to it – this is really the issue. The second point is that the (expat) teachers are old fashioned... so we have one teacher, he has been at the school for 10 years ,...he wants the students to stay constrained in their seats and he bores

⁴² senior leader, girls secondary school

information into their minds. He is not thinking about innovation or using eClasses and he doesn't understand the nature of kids these days. Ask them and they say, 'I have the old style and they say if I change there is no benefit for me'. It is like this here in Bahrain and in the other Arab countries if you want something from me then I will expect to get something in return – so if you take someone or somebody and they give the workshop they say what is the benefit for me? I know what he is looking for; he is looking for an increment but I cannot give them all to the teachers, I only have enough for to give one increment to one person so all the others will be disappointed and they say well why should I change? so these are the issues that we face in our schools. If you want to open the box and hear you will hear many of these issues like this. You will not be closing the box.”⁴³

expectations of traditional pedagogy

The normative and traditional role of 'teacher as transmitter' is not restricted to the disaffected low-status expatriate teachers from other parts of the Arab world. New teachers find that students are reluctant to cooperate in classrooms where the traditional power relationships have become blurred, and that these students often lack the capacity to operate with the autonomy and agency expected within a student-centred learning environment. In other words, the students themselves are reinforcing the implementation of traditional behavioural norms in respect of teaching and learning.

The autonomous lifelong learner – a figure much-heralded in the Twenty-First Century Skills discourse - displays the laudable characteristics of self-regulation, independent agency and a capacity to engage with democratic citizenship (Taylor-Webb, Gulson et al. 2012). Where student-centric education reforms have taken place, more or less successfully, they are either in places where the European Enlightenment tradition is evident (Foucault 1984) or are in regions, such as the Far East, where they have adopted derivations of the European curriculum and organisational models. Examples are evident in the ambitious and aspirational quasi-democratic states such as Hong Kong and Singapore (Warschauer 2001, Chi-kin-Lee and Nai-kwai Lo 2007).

Boilerplate implementation of policy aspirations from the Global North have often been found to be ineffective in the conservative culture of the Arabian Gulf states (Kirk

⁴³ principal, boys primary school

2010). The situation is particularly problematic in Bahrain after the faltering uprising in the spring of 2011, since a significant proportion of school-age students, ranging to a majority in the low SES schools, are from a sector in society which actively opposes many of the government modernisation policies. The daily classroom struggles in government schools in Bahrain are evident in teachers' comments, such as this from a boys intermediate school teacher:

*“students are not getting on well together. You cannot implement the changes you have talked about very easily, there are other priorities. Making better use of eClasses and thinking how to use ICT is not a priority. There are other issues which keep us busy. You cannot imagine in a single day I have maybe 5 confrontations to deal with – students arguing; teachers who have fought or beaten one of the students; parents coming to speak with me because he has to take his child to the police. There are students, maybe 12-15 years old in intermediate schools – it is very difficult now.....what we have been taught: it is very difficult to implement what we have been taught.”*⁴⁴

And from a senior leader in a boys primary school:

*“I have many problems in my school which makes it hard to succeed, for example, I have 60% expat teachers who do not want to change I have a number of examples of violence between teachers and students that keep me away from my main duties – which is developing the teachers, visiting the teachers; how to enhance their skills”*⁴⁵

The above comments make clear that from both the students' and the teachers' perspectives the presence or absence of educational technology in the classroom is largely irrelevant due to the nonexistence of the social conditions necessary for promoting autonomous learning which is facilitated through ICT.

The schism between those in the Bahraini society who wish to follow a more traditional form of education, and those who wish to promote an education reform which promotes creativity and self-expression is evident not only in respect of the variable use of new

⁴⁴ senior teacher, boys intermediate school

⁴⁵ senior leader, boys secondary school

technology but also in the operation of student-centred classrooms. As one school assistant principal from a girls intermediate school comments

“.....now I think that the Ministry should look for quality no quantity. Now what they are looking at is the quantity. There is so much information that they just want to put inside the brain of the student and this is the main problem; we are looking for quality, no more, the information nowadays is everywhere; it’s how you lead the student to help him to get to the information that you want him to get at it how to build a good citizen it is not how much information you give that student – I think the MoE should a little bit change the curriculum to look for quality”⁴⁶

Yet reforms that would encourage students’ personal development through, for example, the creative arts are opposed by a significant proportion of the society. For example, the principal of a girls intermediate school of low SES states

“.....we cannot talk about doing music on the school curriculum; the parents would not allow it”

One of these dilemmas of government within this cultural and political climate is echoed by the comments of a minister of education, on the progressive side of government (MoE_p), comments as follows:

“singing and dancing is part of our culture – we do it at lower grades – not the higher up we haven’t really tested it. We should listen to what the public say about music about art – about the various artistic skills which the students have and we should cater for those either inside the school or as after-school activities. And I think in that area the MOE is still weak – we are working on it but there we have it.. but we still – I would love to challenge everyone that says parents are against music it is a message which should not be dictated by others – you have your beliefs, you are welcome to them ; I have my beliefs; but you should not be dictating your beliefs on me. We all share we do not want something which is cheap – something which is so openly against Islam. But music? In itself ? you will have people debating whether it is haram.... (forbidden, in an Islamic sense)

⁴⁶ senior leader, girls intermediate school

“It is more something about people not wanting to challenge the boundaries. People draw a cocoon around themselves and they are comfortable they do not want to challenge these things; but on the other side are those who like music who support music – they think that the MOE has failed them somehow. And I feel for them.”⁴⁷

the creative curriculum

The development of a creative curriculum is low on schools’ lists of priorities. There are many more immediate and pressing issues. For example, schools remain as the sites of conflict, not just in a social sense, but also in respect of policy implementation, or rather “enactment” , as school leaders endeavour to reconcile competing policy objectives – this from a boys secondary school assistant principal:

“.....yes, yes, you can’t imagine the number of projects. The ministry ask the schools to do projects, to do activities and all these will be done by teachers. So the school distribute these projects to the teachers; so the teachers have to prepare, to teach, to do ICT and to do projects for the MoE as well”⁴⁸

Nonetheless, the views of a senior leader from a high SES girls school are significant, if only to reinforce how little impact technology has had upon innovative teaching and learning. She comments that where students recognise the advantage to them of assuming performative roles, they are able to rise to the new challenge in a way which begins to embed the higher level learning objectives evident in the early aspirations of the KHSF project:

“.....to see how the teachers are implementing the student centred teaching, we are planning this year to evaluate this system how much we are benefiting from this strategic plan – how we improve it; are the students benefiting from it - how we have more information from the students and we are answering some criteria from the students; we want them to evaluate their own learning so we have got the students to evaluate their teachers this semester ; regarding to take some information from the students themselves about the learning and teaching they are having as the students see it”

⁴⁷ government education minister

⁴⁸ senior leader, boys secondary school

“.....at this school we have already a good achievement regarding their outstanding results; but the other thing which is getting obvious to everybody is the students’ personal growth; we are seeing the effects of teaching and the changes we are doing on them reflecting on their personal growth. We know because..... how they meet the outside persons; how they describe themselves; how they participate in activities. They criticize their teachers; they criticize their environment they are having; so these things..... We don’t have any documents for you for but you can see it ..when you can meet our students.”⁴⁹

This highly-regarded school, in a relatively high SES area, is often heralded, with some pride, as one of the great success stories from the Ministry of Education, but the strong support of expert and professional parents provides a compelling evidence that a successful school can be seen to be deriving its success from factors unrelated to the declared priorities and plans of the Ministry. As the assistant principal’s comments in respect of organizational and strategic planning:

“..... we actually started doing our strategic plan before the school improvement and reform programmes ; we started doing our strategic plan from 2006 – we started it ourselves, we got advice from parents, for example, one of them is a doctor at the university. So when we got the plan from the MoE, it is an electronic instrument, so we try and link it to our plan that we have done before”

The attitudes and sophistication of the students at this school are evident in their engagement with educational technology (Taylor-Webb, Gulson et al. 2012). In this senior girls secondary school, the students are present between Grades 10 and 12 – the final grade, being the year in which they prepare for and undertake the final ‘high stakes’ examination upon which is based the pass grade of their Tawjihi – or final school certificate, which admits them to higher education.

“.....Students in Grade 12 get the same opportunities to work with computers as in the other grades; but you find that they are more focused on results, on getting good grades in their Tawjihi so they are not so much interested in the eLearning since this will not be with the high grades”

⁴⁹ senior leader, girls secondary school

Their understanding of the nature their education as a performative exercise, where roles are played and certain behaviours are reified over others, is clear here. The students are highly end-task oriented and, whilst they understand that their evident use of educational technology for their studies will be smiled upon by the school authorities, the students understand that their demonstrable school use of this technology has little immediate part to play in the realization of their own educational transition and their personal ambitions.

5.3 Conclusion

Through the interviews and focus group meetings which make up the empirical part of this study, the gulf between policy making and policy enactment became increasingly evident. This situation, though, is not unique to schools in the Middle East, much of the Future Schools rhetoric from across the globe suffers from a remarkably uniform idealism. The creation of this envisioned educational utopia is underpinned by a belief in a technological determinism (fuelled by the education supply and service industries) which sees an indispensable role for computers in the classroom in bringing about a transformation, and, usually a one-to-one pattern of ownership and use of personal computing devices. Yet the socio-economic disparities in the small island nation of Bahrain are very evident, and to a large extent pre-determine students' capacity to interact with IT in order to gain beneficial educational outcomes. As a senior leader, from a boys primary school in one of the lower SES parts of the community comments:

*“...also at our school, the students come from other culture and still they do not know about technology, because they come from lower socio-economic classes and when you.... And then there are some other from the high ...so there is gap between the – so if we make a presentation on the board it is expired, it is old fashioned for some student yet for some they think “wow !” this is amazing – so there is so much difference about the culture of classes”.*⁵⁰

The participants' comments are strongly indicative of a situation where the strong cultural and socio-economic features in the country substantially outweigh the putative benefits of new approaches to teaching and learning that involve technology. These senior school leaders are clear about the erratic distribution and maintenance of the computer hardware, and the limited programmes of professional development in the

⁵⁰ senior leader, boys primary school

use of educational technology. Additionally, even where the technology is present in the schools there is only a small minority of teachers who have the skills, and are willing to move away from traditional teaching methods, in order to promote student-centred styles of learning which embrace the use of educational technology.

The three significant themes which have emerged from this analysis of the qualitative data – Organisational Culture, Technology and Tradition, reveal the lived experiences of these senior school leaders. The study has served to highlight these as the most significant factors which influence the utilization of educational technology in Bahrain schools. The ambitious goals outlined at the launch of the KHSF share the common technological utopian ambitions common to many countries' educational ICT policies (Zhao, Lei et al. 2006). However, in contrast to the education ICT policies in most parts of the neoliberal world, there are additional cultural, organizational and demographic factors which, in the Middle East context, far outweigh many of the generally recognized impediments to technology acceptance (Selwyn 2003).

The next chapter will consider all these factors in the context of the research questions:

- 1) What is the nature of the reforms and what do policy-makers wish to achieve through the promotion of educational technology in school curricula? For example, what do policy-makers and other stakeholders perceive the link to be between educational technology and the development of the knowledge economy?
- 2) What are the drivers for these reforms at an international, national and local level, and which are the principal organisations e.g. OECD, UNESCO, World Bank?
- 3) Within the context of these traditional Muslim societies are there any inherent contradictions and conflicts between the beliefs and traditions of the population and the development of "Twenty-First Century curricula" which are orientated towards visions of globalisation and the knowledge economy?

Chapter 6

Interpretation of the data and moving towards an hypothesis

6.1 Introduction

In moving towards an hypothesis, or an interlinked series of hypotheses, this chapter places the thematic analysis of the research data within the context of the three research questions. The research questions fall into three broad categories, as follows:

- i) the local impetus leading to the reform policies;
- ii) the principle external drivers for the policies;
- iii) the key constraints to policy enactment.

The first category relates to local and regional policy-making drivers, which are largely economic. The second category considers the ways in which SNO are now operating in these late modern times, as mutually reinforcing agencies with very broadly-defined neoliberal agenda. The third category relates to the situation where a policy suite collides head-on with a populace which is not culturally, ideologically or socially prepared or able to interact with the policy suite in a positive fashion.

6.2 Policy intent and the local drivers – visions of a post-rentier state

From a policy perspective, the reforms related to the KHSF have become subsumed as a subset within a much larger education and public service reform programme with a modernist agenda – the Bahrain Vision 2030 (Economic_Development_Board 2005). The agenda is strongly driven by a belief that the promotion of eGovernment is an indispensable component in the modernisation of public services, this is a regional phenomenon within MENA, encouraged by the supra-national organisations (World-Bank 2003, Morocco 2010, Rorissa, Potnis et al. 2010). The policy dogmas of the SNO persist despite the fact that there is little evidence to support the assertion that the neoliberal model of an efficient ‘minimal state’ is the most appropriate vehicle for transition in less developed countries (Ciborra and Navarra 2005); moreover the assertion is made on the assumption that policy-making is a rational process in these states. However, policy making is not necessarily a consistently rational process, but is frequently guided and determined by many different factors, some of which are

irrational, serendipitous or random. For example, whilst Evans and Davies (1999) relate a rational process of policy transfer and diffusion in a three dimensional model at global, national and inter-organisational levels; Kingdon (2003:117) speaks of a policy primeval soup where ideas “become prominent then fadeproposals are drafted, then amended in response to reaction and floated again (much as molecules bumped into one another) and combine with one another in various ways”. The Kingdon description neatly encapsulates the rather random and opportunistic ways in which the policies, in particular the ICT and eGovernment policies under consideration, have emerged in the Gulf States.

The policy suites which are formulated in these states are not subject to the scrutiny of the international donor community as would be the case in other parts of the MENA region, for example, Jordan or Egypt. Rather, since hydrocarbon revenues currently remain reasonably buoyant, policies emerge from a process, in part, to support the promotion of particular vanity projects for different members of the ruling elites (Lerrick and Meltzer 2001) and, in part, to seek the realisation of abstract notions of a post-oil knowledge economy. The participants in the focus groups had only a vague and distant memory of the KHSF initiative and the project aspirations were not part of their daily travails. On the contrary, within the burgeoning suite of public policy reforms from uncoordinated yet contiguous government ministries, there were many higher priorities for those tasked with policy enactment.

The paradox of the Gulf states

The Gulf States represent something of a paradox, since, in terms of GDP they can be seen as part of the first world, yet developmentally the public policy-making structures are more redolent of the late developing countries (LDCs). As such, the literature relating to the implementation education reforms in the developing world is highly relevant. Writing about the ways in which schooling systems in many developing countries are dysfunctional, unresponsive to improvements and resistant to change Wes Snyder (2013:37) refers to “entangled social messes which are impervious to well-intended interventions and sophisticated solutions” . The project aims of the KHSF (2013:37) are clear about the ambitious intentions and the interview evidence with MoE_p confirms that the project intent has higher ambitions than merely being a vehicle for providing more computers in schools. Notwithstanding the lofty intent, the perception of most school practitioners, as is evident from the interview extracts in the

previous chapter, is that the KHSF is seen, in fact, as a more or less effective vehicle for hardware distribution.

The contrast between teachers' lived experience and the policy rhetoric of the KHSF launch document is marked. Through the analysis of the texts, both written and spoken, using critical discourse analysis (CDA) it is possible to document multiple and competing discourses, trace their provenance and point to discursive shifts in policy implementation (Eqab 2003). Fairclough (Taylor 2004) has noted that the use of language has become important in the social processes related to the emergence of the "knowledge based economy" and ICT. In this context Fairclough refers to "discourse driven" social change, or, as Luke (2001:97) has expressed it " the conditions of globalized capitalism are enabled by discourse-saturated technology and environments"

Statements such as the following, from the KHSF launch document (Appendix 4: 234), serve to underline Luke's observations:

"it is a fundamental turning point from the traditional teaching-learning process to a future process based on technology employment It provides a learning environment for students, teachers administrative staff, and society which allows interaction at any given point".

This utopian rhetoric merely echoes the aspirational and future-laden discourse of the transnational IT conglomerates, as illustrated by this extract from Microsoft's future school project (2002) :

"Rooted in the vision of an empowered community where learning is continuous, relevant and adaptive, the School of the Future will; create a replicable model that improves student achievement through holistic reform of secondary education apply research and development to generate educational practices, creating an environment involving all members, igniting them to take a passionate, personal responsibility for learning and inspiring a commitment to active citizenship incorporate best of class technology solutions in all appropriate aspects of the learning community including curriculum delivery, community collaboration, back-office support and content creation, dissemination and assessment"

The technological determinism implicit in the sales and promotional materials of the IT conglomerates is reflected in the KHSF launch document (Microsoft 2005) to the extent that the development of technology requires “a change in the form of Arab society” as follows (Appendix 4: 221) :-

“Technological renovation in society requires a change in the form of Arab society so that it may face its problems, and culturally grow so as to be able to face continual technological changes. This step can be achieved through exchange of scientific theories and their applications, and employing them to serve society by making curricula the basis for employing technological tools.”

The statement is very clear about the perceived for societal changes in the Arab world to accommodate a situation where technology is changing the world more quickly than traditional societies can currently comfortably accommodate. It should be noted that the science curricula taught in schools and the beliefs of the teachers do little to promote this idealised vision of the power science and technology having the capacity to challenge the embedded epistemology of a conservative culture into the Twenty-First Century. For example, in a survey amongst trainee science teachers at Bahrain Teachers College, Funda Ornek (Eqab 2003) found that their views about scientific knowledge tended towards the traditional Arabic construction of “Al Bayan” or traditional knowledge (Ornek 2011) – see Chapter 1. These trainee teachers saw knowledge as being fixed and not changing over time and that the scientific knowledge learned in classrooms is not applicable to the “real world”. This research accords with the observed practice of science education in the region, including Bahrain, where a great emphasis is placed on assimilating a corpus of scientific knowledge with little or no practical discovery or experimental work in schools.

The style and the presentation of the KHSF launch document are in line with the production values of commercial promotional literature. The brochures are printed in full colour on expensive high-gloss heavy paper with many photographs; the document is prefaced by an exchange of effusive letters of congratulation and praise between the King and the Minister of Education together with enthusiastic statements from a member of the UNESCO Executive Board (Appendix 4:225). The style of the publication is redolent of the international trend in future-gazing government policy documents which are “essentially promotional genres” designed to bring about change

(Alawi 2009). In this publication, many of the photographs are posed and stylised, such the one I have selected for the title page (appendix 4 :229), where three girls are posed around a microscope with one of them seeming to look down the eye-piece. The girls are positioned around the microscope as if they may be doing some real research or discovery – thus making an iconic statement of modernism and girls empowerment. However, the subjects are arranged behind and to the side making it impossible for the posed microscope user to see anything beneath the objective lens. This discourse of illusion continues through the document, the high ambition of which does require a certain suspension of disbelief on the part of the reader. For example, (:230) the aspirations from the Strategic Outlook of the Project are:-

Continuing economical and social development

Investment in knowledge-technical competition

Developing a knowledge society

Educational system based on employing educational information and communication technology

text as a material-semiotic actor

These aspirations are typical of the “several prophecies (which) have been made about changes that may result from the increased use of IT in most of the Western world” (Fairclough 2001). In the KHSF launch document the text, which follows these ambitious and somewhat far-fetched statements of strategic outlook, is not clear about how these deep social changes will be brought about by the installation of computers in schools and the introduction of an electronic virtual learning environment. In interpreting the narrative it is helpful, alongside the critical interpretation of the text, to adopt an approach derived from science technology and society (STS) studies (Jensen and Lauritsen 2005). This approach of reading with the text, rather than simply interpreting and criticising it, looks to see where the text goes – seeing the text as a material-semiotic actor – and what movement it has over and above its original textual representation. The STS reading is not so overly concerned with the textuality and its meaning, but it more interested in its agency as it moves and influences practices. As an actant, the document, and the associated project, have been very successful, in the sense of establishing the credibility of the small island kingdom in the eyes of UNESCO and other SNO. Through this, the KHSF project launch had a marked effect upon not only the ICT credentials of Bahrain but also in its wider ambition of being seen as a centre of commerce, wisdom and stability in a turbulent region. Notwithstanding the

limited impact upon teaching and learning in schools, the positive reception which the KHSF project received from UNESCO has served as an encouragement for the government to pursue a better-articulated agenda for educational reform through the engagement of McKinsey and Co to formulate a more coherent and better articulated vision for change (see Appendix 2). The McKinsey strategy (Law 1992) advocated eight reform themes as follows:

- Ambitious and shared vision for excellence*
- Student focused school leadership and management*
- Teaching that drives Student learning and development*
- Developing our teachers*
- Learning for work*
- Ensuring all schools are creating a safe environment for learning*
- Setting high performance standards in schools and forming active partnerships between the MoE and the schools for performance accountability*
- Support schools to perform*

Importantly, the consultants advocated a change of culture within government in the following ways:

- From entitlement to meritocracy*
- From individualism and secrecy to collaboration and transparency*
- From hierarchy and control to empowerment and accountability*
- From blame and punishment to learning and development*
- From subjective opinion to evidence-driven decisions*
- From exclusion and intolerance to respect for all*
- From bureaucracy and fire-fighting to strategic action*

In identifying the key impediments to change the consultants' analysis had been accurate and forthright. However, the lack of progress in achieving the culture changes necessary is marked. Indeed, from the responses from teachers and school leaders involved in the consultation exercises, little seems to have change in respect of the culture of government. A significant consequence of the civil unrest which Bahrain has experienced over the years, since the Arab Spring of 2011, is that in many ways the public services have become more controlling, more prone to punishment and blame,

less tolerant and more bureaucratic – in stark contrast to the McKinsey-inspired transformational rhetoric above.

6.3 External Policy Drivers -Technology-enriched futures and public policy making

The external policy drivers are shaped by two neoliberal features that strongly influence development of the global knowledge economy in the information age. The first feature is the increasing role which the private sector, including the global IT industry, is playing in state schools in the promotion of the use of educational technology in the classroom; the second feature is the seamless linking of educational technology with what has become known as the Twenty-First Century Skills agenda. Each of these features can be seen as evidence of the education sector, in common with many public services, being carried along upon the rising tide of neoliberalism. Since the 1980s, the increasing involvement of the private sector in the provision of services which, hitherto, had been the exclusive preserve of elected governments (Barber, Mourshed et al. 2007), has led to a trend in the understanding of the purposes of education away from the aims of nation building, providing moral purpose and responsible citizenship (Ball 2007) to a becoming a process of human capital formation (Sahlberg 2008). The rise in the significance of computers in education and the close association between the promotion of new technology in schools and the attendant involvement of commercial IT companies serve as key indicators for the growing influence of the private sector in state education. Stephen Ball (2007) has described this transition as marking a fundamental shift in government policy making from one that was based on Keynesian Welfarism – where enlightened state spending is said to produce economic growth by the so called ‘multiplier’ effect, to one based on the principles conceived by the Austrian free market economist Joseph Schumpeter – where the free market and ‘creative destruction’ promote the conditions for social and economic development driven by market demands. As noted in Chapter 2, Schumpeter’s idea of “creative destruction” describes an economic system where the battle of ideas and invention replaces the notion of an economy based upon sweated labour adding surplus value to raw materials (Schultz 1961).

the neoliberal imaginary

As noted earlier, policy making is often based around the idea of an 'imaginary' upon which future-oriented projects are crafted (Schumpeter 1943). This imaginary takes for granted the existence and the progress towards a universal technologically-enriched global knowledge economy – a constructing which neatly corresponds with the so-called 'flat world' of neoliberal rhetoric (Facer and Sadford 2010). Within this context, beginning with initiatives in the UK, Sweden and Canada at the start of the 1980s, the past thirty years have witnessed a steady expansion of educational technology policymaking around the world (Friedman 2005). Technology-enhanced learning is often presented by researcher, advisers and policy-makers as an essential modernising tool for education (Selwyn 2012). As part of this study, in the previous chapter, these views were echoed by the education minister (MoE_p) when he stated that “... *If ICT is missing, then the education is not up to scratch*”. What is notable during this period is the remarkable similarity in the policy agendas which have been enacted in different countries operating in very different contexts resulting in what Zhao, Lei et al. (Negraponte 1996, Jensen and Lauritsen 2005, Prensky 2005, Heppell 2009) have described as “ a techno-centric, utopian and economic driven mind-set” amongst policymakers all over the world.

In his international comparative analysis ICT policies across Kozma (2006) identifies four common features as follows:-

to support economic growth – as in the case of Singapore (2008) , and in Jordan’s Education Reform for the Knowledge Economy (Economic-Review-Committee- 2003);

to promote social development – as in the case of many of the European Commission’s policies, especially Finland (World-Bank 2003);

to support education reform, as in the case of the USA and the UK (European-Commission 2000);

to support education management, through computer-based testing, online content delivery, data analysis and improved accountability in the case of the USA (Means and Olson 1995, Means 2006, Heppell 2009) and Malaysia (Department-of-Education 2004).

Since the ideology and the policy differs in respect of education, information technology and the knowledge economy have emerged from the countries of the Global North, it

has been informative, therefore, to take these countries as a point of reference for the policy developments relating to technology in education.

A general feature of the education reform programme in Bahrain is its alignment with the techno-enthusiasts, the pragmatic technologists (Ministry-of-Education-Malaysia 2003) and the received orthodoxy of the SNO (Kozma 2005) which advocate policy outcomes that go beyond merely embedding of computer literacy and operational competence into school curricula, but envisage ICT as a powerful personalisable learning medium which can serve as a catalyst for the development of many other personal skills as well as skills for employability. This is consistent with a contemporary utilitarian/pragmatic view of education. The translocation of education from a process of personal development, citizenship formation and nation building (UNESCO 2011) to one of individual development and human capital formation (Sahlberg 2008) has increasingly been evident in the evolution of education policies relating to both the skills for work and those for lifelong learning as the neoliberal agenda has become evident in policy formation (Schultz 1961).

However, interestingly, supporters of technology-enhanced education reforms have emerged from all parts of the political spectrum both from advocates of the neoliberal marketisation of education and from those with more radical and inclusive views. Paradoxically, much of the market-based rhetoric can be seen to be consistent with a radical view of education which advocates the removal of the education process from the custodial classroom and puts it into the context of “real life”, albeit in a symbolised form (Ball 2012). This alternative, anti-establishment, view which puts education into the hands of the learner is redolent of Ivan Illich’s *Deschooling of Society* (Friesen and Saevi 2010) and Paulo Friere’s *Pedagogy of the Oppressed* (1971); Illich saw established schools as repressive institutions which stifled learning and creativity, whilst Friere viewed lifelong learning, amongst other things, as a way of mounting a popular struggle against exploitative capitalism.

The influence of SNO and global corporations

Such is the international significance of commercially-influenced policy formation in the USA, that the reframing of the very purpose of schooling to reflect “new human capital theory” takes on a global significance through its adoption by the key development SNO such as the World Bank and the OECD. The OECD (1972) has suggested that education, should now be producing different kinds of persons to reflect the

transformed nature of knowledge production and utilisation, work organisation and inter-cultural relations in an age which are the products of the 'information revolution'. These individuals now need to be better able to work creatively with new knowledge formations, be flexible, adaptable and globally-minded as well as being interculturally confident lifelong learners. It is through this promotion of the ideals of social efficiency and the capacity of individuals to compete in a global knowledge economy that there is a peculiar rearticulation of the older more liberal humanist ideals of lifelong learning. This despite the fact the discourse has emerged primarily as a consequence of changes in the economy, notably "the rapid diffusion of information and communication technologies, the constant application of science and technology and the globalisation of the trade in goods and services" (1996). To accept the neoliberal interpretations of freedom, justice and efficiency requires an acceptance of a particular mode of existence which pre-supposes the development of an autonomous self, in terms of choice, self-regulation and governance, (Field and Leicester 2000) as well as the governance, or domination, of the apparatus of state. This interpretation is highly problematic in the context of the Islamic states of the Middle East, where notions of the free will and the autonomous individual, even the state itself (Lemke 2000) are highly contested notions. The dilemma of social control versus individual autonomy in the Middle East – an instance of the agency/structure dialectic outline in Chapter 3 - has strong resonances with the situation in Singapore (Tibi 1997) where government policies have promoted strong economic growth and prosperity within a tightly controlled state, with strict media censorship and social conformity. These examples from the Middle East and the Far East represent particular dilemmas or contradictions inherent in the information society as noted by Castells (Warschauer 2001): that between *the net* and *the self* (1997).

6.4 Policy constraints – culture, identity and limited local capacity

The broader motives for governments and political parties to identify themselves with modernity and social advancement have, in the Middle East of the second decade of the Twenty-First Century, become complex and, in some ways, contradictory. On the one hand the people in these countries have expressed their desire to be part of the globalized economy, with its predominant Western neoliberal discourse, whilst, on the other, there has been a growing resurgence of conservatism. The Arab Spring, whilst borne on a wave of social networking via new media, has resulted in many parts of the region in the election of governments, the members of which, shun modernity and what

they see as the soulless hedonism of the West (Warschauer 2001) . The Salafists and their supporters did enjoy electoral success in Tunisia and Egypt, but were ultimately powerless when they attempted to challenge the neoliberal orthodoxies of contemporary global governments. Nevertheless, in the Gulf states the minority governing families have been destabilised (Thompson 2010); they have to contend with an international agenda which has been forcing the pace of modernity, yet with a domestic agenda where the conservative elements of society, particularly the clerics, have been urging a new and self-confident resurgence in Arab identity. For example, since 2011, colleagues working in Universities in Bahrain, Qatar and the UAE have seen a diminution in the use of the English language and a resurgence of Arabic as the primary language of instruction and discourse (Davidson 2012). The policy drivers, which had seemed quite clear cut as recently as 2010, have now become nuanced with a strong and rising Arab regionalism and governments with a distinctive recidivist tendency (Rostron 2012) . The resurgence and reinvigoration of local cultural identity requires a recasting of the neoliberal globalization narrative in the region. This may be seen as a brake on progress but it provides the opportunity for more time to adapt the policy suites “borrowed” from the Global North to become more localized and authentic (Feldman 2012).

Notwithstanding the ambitious intentions of the KHSF policy, in practice the schools’ capacity to respond to the challenge of change and reform has been limited often for reasons completely unrelated to the technology. The heavy reliance, in boys schools in particular, upon expatriate teacher whose earnings are significantly less than those of Bahraini nationals creates an impediment to change which is not only through technophobia or poor training and preparation, but is, at its root, related to dissention, disaffection and despair. These individuals, from the poorer parts of the MENA region, receive a significantly lower salary than their local counterparts, as was forcefully highlighted by one of the participants in the focus group discussions in Chapter 5. These expatriates do not have the benefit of annual incremental progression on their salary and are frequently denied the same training and professional development opportunities as local Bahraini teachers.

The dynamics of technology integration

Despite the clear specific and unique features of the technology policy enactment of the KHSF which have been detailed here, there are several common features which

are common to and identifiable with some established narratives of technology implementation and how different groups within a workplace respond to the new systems implicit in the implementation of change management with and through technology. Ciborra (Steiner-Khamsi 2004) has characterized this as 'management is control' – see Figure 7. In this diagram (2002) there is a typical top-down strategic alignment and process driven approach to the implementation of IT systems in organisations.

The process enactment which takes place in the lower part of the figure I have characterized as three separate, and partially overlapping horizontal loops:

Loop A - the 'Loop of inertia', represents a typical group of school practitioners who are the 'angry orphans'; they feel left out of the policy-making yet feel compelled to try and make it work for them, but in ways which are familiar to them. An example of this would be the teachers described in Chapter 4 who, when asked to undertake their school development planning using a dynamic online tool, simply downloaded the document and worked with it offline using Excel spread sheets, so subverting one the central objectives of the MoE which was to be able to surveille the schools and monitor their development planning activities.

Loop B, I have termed the 'Loop of serendipitous conformity', represents a common situation where teachers accept the technology which is provided for them, not on the basis of any perceived need, but rather on the basis of the nebulous high-level policy formation. Through their acceptance and use, they derive a post-facto justification for the technology use, and, incidentally along the way they may find some things about the technology which are quite useful in their day to day teaching – an example of this would be the widespread distribution of interactive whiteboards (IWB) in the elementary schools and their subsequent use by teachers as form of 'edutainment' for the students in their class, and a break from the former endless diet of linear formulaic PowerPoint presentations.

Loop C – the 'Loop of extraordinary agency', represents the group that I call the 'Rebels with a cause', these are the technology enthusiasts who understand the technology and can use it highly effectively, often in way unforeseen by the MoE. An example here would be the mathematics teacher who created the website through social media with which to share course work and homework with her students. As the

account in Chapter 5 demonstrates, this form of enterprise was severely frowned upon by her conformist headteacher who feared punishment from the MoE for such free expression and use of the technology.

It will be noted that in all cases the enactment cycle results in 'Project Drift' (bottom centre of the diagram) which requires top level intervention and policy modification from the central policy-making entity at the top of the hierarchy in the MoE. The KHSF policy drift has been so extensive that a complete reformulation would be necessary in order for it have any of the desired impacts upon school practices in respect of educational technology.

Mapping the dynamics of ICT infrastructure

Adapted from Ciborra et al (2001)

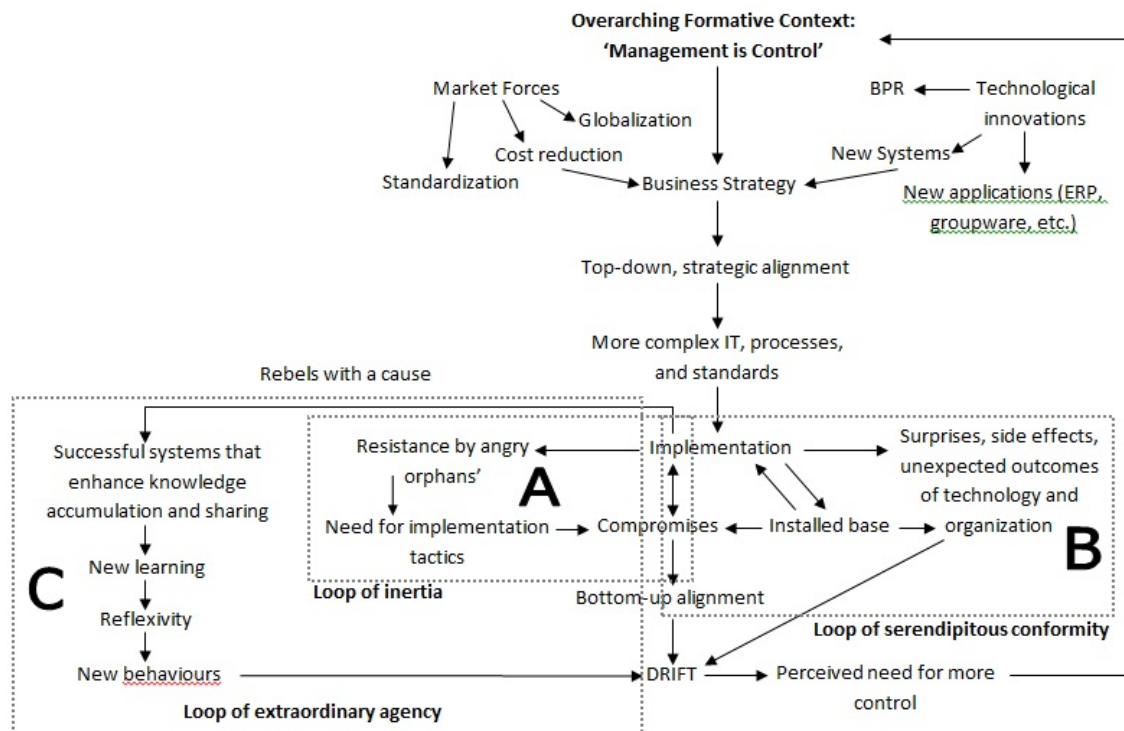


Figure 7 Mapping the dynamics of ICT infrastructure

6.5 Making sense of the data

Whilst there is political appeal on the international stage for government policy to be seen to be fashionably marching in step with the technological revolution, the future-laden political discourse which accompanies many technology projects in respect of computers in social and public service settings, according to some commentators, demonstrates a misunderstanding of how technologies spread and how they work as they do so (2001). This is a finding which is consistent both in the 'enlightened' neoliberal West as well as in the late developing countries (LDCs) and those which adhere to contrasting beliefs and ideologies.

Markussen and Olesen's (Bowker 1995, Latour 1996, Markussen and Olesen 2001) research relating to the introduction of electronic patient records in the health service in Denmark highlights the professionals' loss of immediate patients' interests through their primary focus upon the implementation of an IT project. These same authors point to Latour's analysis of people and the technology of innovation. In this instance, they remind the reader that Latour proposes two ways in which ideas and artefacts circulate within organizations – one rationalist, one more rooted in observed human behaviour. In the rationalist, or *diffusion*, model there are three key elements 1) the initial power, that starts the circulation of a new initiative 2) the certain inertia that seeks to preserve the status quo 3) the medium through which the idea or artefact travels. The other behaviourist, or *translation*, model assumes the use of the artefacts by later users, who were not party to the initial innovation. Here the users will neglect it, bend it, betray it, modify it, in sum they will *translate* it in accordance with their own projects and priorities – they behave as the 'angry orphans' characterised in Loop A of Section 6.4 above. Bowker (1995) uses the concept of "infrastructural inversion" to describe an erroneous, and dystopian, conceptual shift in analysis which sees technology as a primary mover in a change process where individuals and social movements become passive agents of this change rather than controlling or influencing it, in other words displaying 'serendipitous conformity', as in Section 6.4 above.

In the case of the use of educational technology as part of the KHSF project, the *diffusion* phase can be noted, where, as several focus group participants observed, some early adopters took the use and application of the technology in a positive fashion and invested something of themselves in the technology and its further *diffusion* amongst the students with whom they were dealing (as noted in Loop C,

'extraordinary agency'). Nonetheless, for the majority of teachers, there has been a significant inertia to the take-up of the technology (Loop A). This inertia has been compounded by the lack of appropriate professional development opportunities associated with the technology. Moreover, the poor equipment maintenance coupled with the absence of any upgrade and renewals policy, which has led to repeated hardware failures have bolstered the attitudes of the sceptics who see their position of opting for weak engagement with the technology as being vindicated. The medium – or aether (1995) - through which the KHSF policy has travelled, i.e. the school environment has resulted in its *dilution* for many teachers. This dilution has been to such a large degree that the policy has disappeared from their consciousness completely. However, for a few, there has been a *translation* where certain teachers have adopted co-operative student-centred strategies and collaborative methodologies to promote the broader policy-intent of the KHSF – namely (Appendix 4)

Developing students' personality and enabling them to generate knowledge, and not just be a recipient of it. It also enables students to be active members of an information society based on economic knowledge.

From the focus group discussions, it will be recalled that several of the teachers in question, who were promoting these Twenty-First Century Skills amongst students, were achieving these progressive objectives by means of classroom organisational strategies which were not at all reliant upon the educational technology.

Recurrent instances of the techno-mythologies of information systems

In the late-modern, or post-modern, age, science and technology have in many ways, for contemporary societies, replaced ancestral belief systems in transcendent deities (Fuller 2008). In his account of the Aramis project – the ill-fated pod-based passenger transport system in Paris in the early 1990s – Latour's narrative (Latour 1993) describes the utopian idealism of the project architects becomes manifest in the technical outworkings and ultimate failure of the project. He tells of how the project and the artefacts themselves developed agency or grew a "life of their own" over and above the policies which were written to create the project. In this context ANT has been criticised for "flattening" the landscape and giving apparent agency to non-animate artefacts which is the same equivalence to human agency (1996). Despite these limitations and legitimate criticisms there are elements of ANT which can provide a helpful frame. Just as in Aramis, the motivations of the policy-makers in Bahrain were

carried along on a tide of modernism. In the case of KHSF, the policy has survived and enjoyed a life of its own quite irrespective of the lack of impact in realising the earlier lofty project goals.

In his analytical treatise *The Labyrinths of Information: Challenging the Wisdom of Systems* Claudio Ciborra (2002) takes several instances of the implementation of information systems into organisations. He observes how, in their realisation, the systems are always subject to human subversion or reticence. He talks of the “swamp” and what happens when perfectly imagined systems are tried out in reality. People are introduced to systems which are then made to work from “them” in their day to day condition rather than depending upon a pre-ordained “system”. Ciborra terms this “bricolage” or improvisation, coping or making systems work on the basis of the users’ life experience rather than behaving as they are supposed to behave.

In invoking the term bricolage, Ciborra has borrowed from Levi-Strauss’s celebrated discourse on ‘tinkering’ or, what in the UK would be termed, do-it-yourself (2002) . Although Ciborra’s frames of reference have been almost exclusively industrial and commercial rather than governmental and educational, the bricolage concept is a helpful way in which education workers in the front line find ways of improvising to accommodate the expectations of policy makers. A clear example of this is the account the focus group participants gave of the way in which the online planning tool from the MoE was found so hard to use by the school practitioners that they simply downloaded the files and translated them into Excel spread sheets. In doing this the participants have clearly defeated one of the important objectives of the online tool – namely for the MoE to be able to remotely survey schools progress in policy implementation. Whilst these senior school leaders can claim some success in subverting this particular system, they have been less able to circumvent other surveillance systems, such as the preponderance of CCT cameras in schools. Another powerful surveillance system that has defied subversion is the daily electronic staff attendance system. In common with all government employees all the staff in schools are required to register their attendance each day through a fingerprint-recognition machines located in the entrance lobbies of all schools and government offices. Quite irrespective of the capacity of the education technologies to stimulate the development of young learners as self-driven entrepreneurs, the pervasiveness of IT systems for administration and surveillance underlines their effectiveness in providing yet-more

effective tools for the development of what has been termed a “surveillance society” (Lyon 1994, 2001, Land and Bayne 2005). This electronic tool becoming a very clear example of the Panopticon – a term which Michel Foucault (1968) expanded and developed from the celebrated utilitarian Jeremy Bentham (1979).

towards a general hypothesis

To draw conclusions and move towards a general hypothesis, which addresses the research questions, the New Institutional Economics framework (NIE) which was outlined in Chapter 3 (Wood 2007) provides a means by which the suite of policies aimed at societal modernisation can be placed within the contemporary context of the resurgence of Arab nationalism coupled with the policy-makers’ enchantment with information technology and the neoliberal imaginary. Figure 8, overleaf, is a representation of the different drivers and impediments where policy enactments take place. Figure 8 is a reproduction of Figure 3, but the relative positions of Bahrain and Jordan on the figure have been moved to reflect the impact of the reform policies coupled with the social unrest as the outfall from the Arab Spring in 2011 continues to ripple through the region. Local and regional conditions since early 2011 have created a highly unstable environment in which to attempt to promote far-reaching and controversial social and cultural reforms. Moreover, economic activity has been dramatically affected by the regional instability. Consequently, the dots on the Figure representing Jordan and Bahrain respectively, have both moved to the left of the figure, indicating a slowing of economic growth and an increasing prominence of the conservative societal forces which endeavour to eschew western commercialism and social mores.

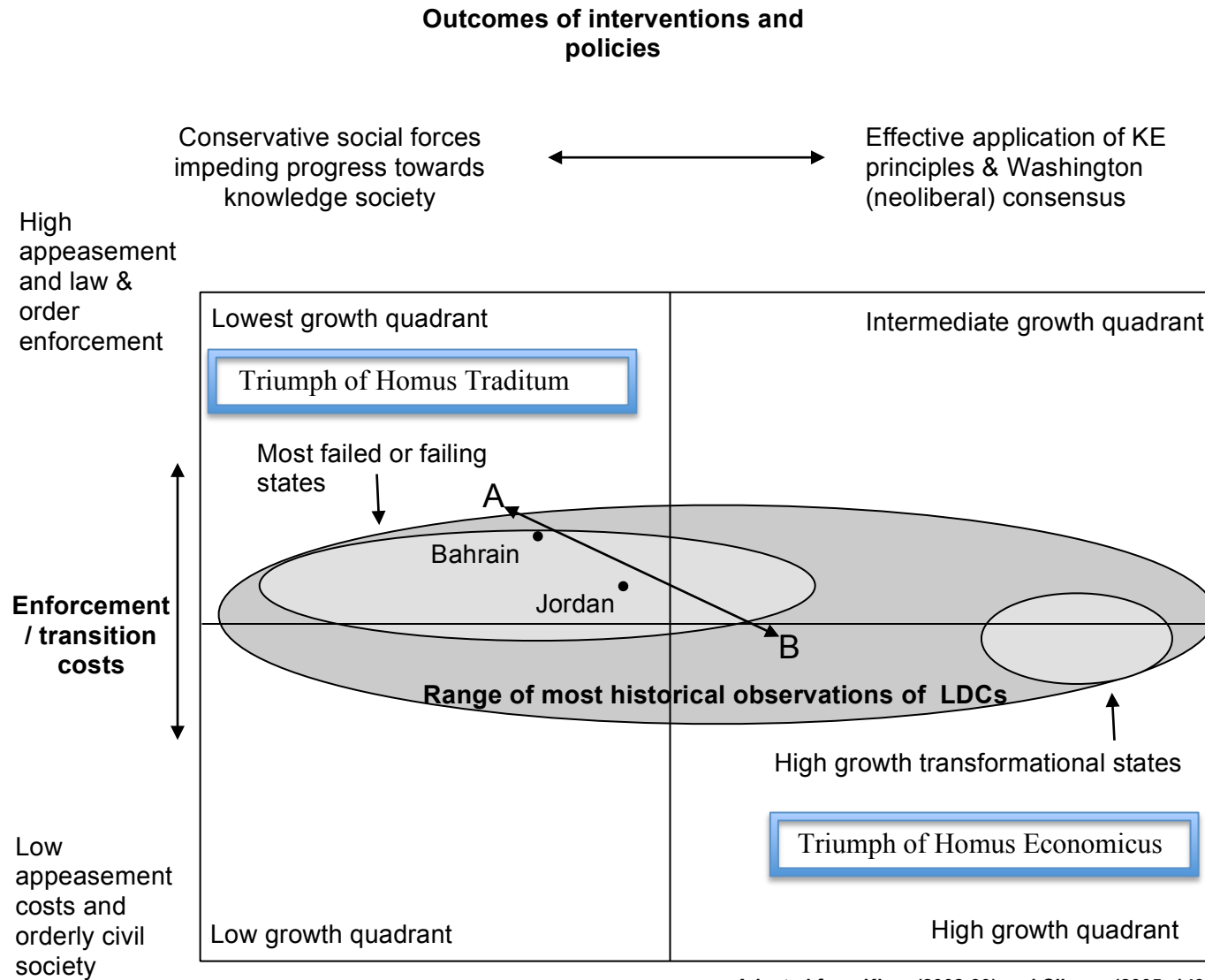
As a general hypothesis it may be posited that the education reforms for the knowledge economy in the Middle East will continue to fail and have little impact upon the local populations until a formulation of change can be made which is more in tune with local systems and beliefs, as well as with the prevailing social and cultural mores prevailing in these countries. Education technology is merely a symbol in this regard. To be sure it is a symbol of Western modernisation, but, just as education technology is, in the overwhelming majority of classrooms in the Global North, having little impact upon traditional pedagogy, in the Middle East it is having even less impact. To have the sort of impact and produce the social reforms that policy writers and government advisers have in mind, then the custodial classrooms in government schools in the Middle East

would have to transform beyond recognition. This transformation would have to be in a way that not only would most teachers in the region be incapable of managing, but which would also produce educational outcomes that are at odds with the evident desires of the regions' authoritarian rulers' to ensure the perpetuation of a placid populace that is compliant and content.

Education Technology is merely a vehicle through which learners can begin to become emancipated in schools, take responsibility for their own learning and take their first steps in becoming free, democratic, self-willed individuals. Such characters have been lauded through the ages, by the progressives, as the ultimate desirable product of state education systems from the days of John Dewey (1944), Ivan Illich (1971), and Paulo Friere (1972) to the advocates of progressive education reform of the current day such as Guy Claxton (2008) and Ken Robinson (2011) and the techno-enthusiasts like Stephen Heppell (2009).

There is, of course, a supreme irony here as countries of the Global North are rejecting the 'progressives' and returning to an advocacy within state schools of 'traditional' values and methodologies (Ball, 2012^a), the policy formations outlined in this thesis suggest a movement in the opposite direction being suggested for the LDCs .

Figure 8) Development trajectories of Bahrain and Jordan since 2011



Adapted from Khan (2002:30) and Ciborra (2005: 149)

A recent USAID report (2012 :12) on Jordan reflects the failure of the education reforms as follows:

“.....there has been slow progress in creating sufficient employment for its rapidly growing population and in overcoming the mismatch between education and the demands of a knowledge based society” .

In Bahrain, the low impact of the education reforms upon the development of school leavers' 'skills for employability' has been compounded by a resurgence of the animosity and consequent civil strife engendered between the two Islamic sects that inhabit this small island. One manifestation of this animosity has often been evident through a resurgence of Arab nationalism, religious piety and observance, and the consequent rejection of modernism on the school curriculum and a marked increase in street demonstrations against the government and the ruling family. On the Figure 8)the recent trajectory of Bahrain has been even further to left on the X-axis and upwards on the Y-axis and policing and enforcement costs have increased markedly.

The success of the wider 'macro' impact of the KHSF project could be judged by noting the trajectory of Bahrain along the A – B axis. A successful realisation of the wider project objectives i.e. *“Technological renovation in society”* would be evident in this representation by a movement along the diagonal axis towards point B, in the direction of 'Homus Economicus' ; failure would be characterised by movement towards point A, characterised by 'Homus Traditus',or ' traditional man'.

From the available evidence, the current direction of travel is towards A, as the high costs of appeasement and law enforcement are strong indicators that the conservative social forces, which are impeding travel towards a knowledge society, are in the ascendancy. The ethnographic approach adopted for this study has enabled the research questions to be approached with directness and clarity. More than anything it is clear that the policy intent of the education reforms have objectives which go far beyond simply an improvement in the application of computers in classrooms. Yet the key element in the successful realisation of education technology projects, notably the successful professional development of staff, and the transformation in working practices has been found to be absent in any coherent sense that goes beyond simple operant product training by IT hardware vendors. In common with so much of the interventions and reform initiatives promoted by the SNO, there is an unquestionable

neoliberal agenda permeating all the elements within the policy suite. Yet in the conservative societies in the Gulf and MENA region, there is a fundamental mismatch between the aspirations of governments and peoples to align their countries with the global economies and enjoy all the benefits therefrom, in terms of the consumer culture and freedom of expression, and a society which, although it is happy to enjoy the sensual delights of consumerism, is, to a very great extent, recidivist, introspective and theocratic.

6.6 Conclusion

Any cultural commentator from the Global North must be constantly wary of the risks of an analysis which could be labelled essentialist, through a lapse into the post-colonial arguments relating to the “end of history” and the “clash of civilizations” which were prevalent in the early 1990’s at the time of the collapse of communism in central and eastern Europe (Fukuyama 1992, Huntington 1993). Despite being widely discredited (Koechler 2002, Little 2003, Rizvi 2011), the essentialist arguments have retained traction in the popular imagination, especially in the decade since the 9/11 attacks on Washington and New York. The unfolding events in the wake of the “Arab Spring” of 2011 have served to reinforce the perceptions “otherness” to which Edward Said (1978) referred. However, the frank and open dialogues with the participants in the focus groups in Bahrain did not betray an alien and Arab-essentialist professional outlook – the participants’ views are not dissimilar to the range of responses and complaints one might hear from teachers, as the enactors of central government performative imperatives in, for example, the UK - as outlined so comprehensively in the recent publication by Stephen Ball and colleagues (2012^b). Moreover, the manner in which the technology policy enactments have been taking place in the different schools together with the characteristics of the different responses by the contrasting ecologies of the school environment were typical of familiar technology acceptance trajectories evident in organisations – both educational and non-educational – in the Global North.

In a globalised education environment many of the targets, the neoliberal objectives and shared vocabulary transcend national and cultural norms and expectations. At an institutional level the Bahraini schools’ relationship with a rigid and hierarchical central government bureaucracy are redolent of educational institutions in Central and Eastern Europe. As Fairclough (2010) has observed these characteristics are evident not only amongst those public institutions emerging from their previous regime of communist

central planning, but also within those schools and universities in the more recent EU accession states, such as Austria, which after more than 15 years of EU membership still maintains strong central governments control whilst projecting the 'myth of autonomy' in relation to establishments of higher education (Fairclough and Wodak 2010).

Moreover, at the level of the individual actor in the education system – teacher, principal, student - the essentialist 'Arab Mind' arguments (Al-Jabir 2006) where tradition and tribe transcend rationalism and self-interest are similar to the 'Romanian mentalities' highlighted by Letcu (2004). which are seen as an obstacle for change since they do not adequately reflect the dispositions in the direction of enterprise, self-reliance and individual choice, all of which are essential components to transformation into the neoliberal imaginary (Fairclough 2005). In other words the behaviours evident in the responses from the interviewees in Bahrain reflect more of a commonality of situated reality with other actors in state enterprises within LDCs rather than a situated reality which is peculiarly 'Arab' - and the product of the local circumstances surrounding the lives of the citizens in a Gulf Arab state in late modernity.

Multiple paths to modernity

The research findings reported here support an interpretation which sees the forces of globalisation, far from creating cultural homogenisation, are strongly nuanced by local circumstances, beliefs and traditions, when they confront long-established communities (Kersten 2011). Following the arguments of Appadurai (1996) and Pieterse (2009). the findings challenge the assumption that globalisation and modernity of preformed packages from the Global North can be simply imported and assimilated within the LDCs (Featherstone, Lash et al. 1995). This commentary takes account of the fact that there are multiple paths to modernity and there is not a simple movement in the direction of cultural uniformity and standardisation (Kersten, *ibid*). This "global melange", to which Pieterse (*ibid*) refers has been characterised by Susan Robertson as a process of "glocalisation" (Robertson 1994(Featherstone, Lash et al. 1995). Ulich Beck suggests that these forces which seek to project local meaning and significance upon the standardising forces of globalisation represents a "second modernity" (Beck 2000). Beck claims that underlying this second modernity is a form of cosmopolitanism as it endeavours to incorporate and synthesise universalism, relativism, nationalism and ethnicism as well as religious diversity(Beck 2004). According to Kersten (*ibid*) this is marked contrast to the Enlightenment cosmopolitanism that was first developed by Kant and was inspired by the Hellenic legacy.

Whilst endorsing Kersten's analysis, the findings from my study point to a marked dichotomy in levels of cosmopolitanism between policy makers and advisers who, in the policy pronouncements project an unreconstructed modernist narrative, based upon Kantian Enlightenment, and those tasked with policy implementation or 'enactment'. It is in the policy enactment where the local forces and traditions influence the actors to bend and distort the policies to make them more manageable and susceptible to implementation within their lived worlds. The research findings here are suggesting that, when interpreting the data within the context of the diagram, Figure 8. If we accept that, owing to current circumstances, the movement of travel on the diagonal axis is towards "point A", then it can be taken that the powerful local forces (or "modernity two forces") are having a significantly greater influence than the forces of the policy-makers' intent ("modernity one forces"). The unsettling effects of civil disobedience, coupled with an increasing frustration and militancy amongst students and their parents make it hard for education reforms to have much traction in the traditional classroom. Even when the teachers themselves are enthusiastic advocates of, for example, discovery learning and student-centred pedagogy the students themselves are frequently reluctant to modify their conditioned response from that of a passive learner to one of active engagement.

Chapter 7

Bridging the long divergence

7.1 Introduction

In the previous section the research questions were addressed and to a large extent answered. As the research has concluded: the main declared motive for these educational reforms has been to try and use technology policy to endeavour to create a local economy based upon the development of human capital rather than relying on rents from indigenous mineral deposits in the region; under the aegis, and following the recommendations of, the major SNO – notably the World Bank and UNESCO, the policy makers have been following the international trend in perceiving a close connection between educational technology and the development of a knowledge economy. These recommendations have, unsurprisingly, the additional endorsement of the global IT conglomerates, through their marketing and their Corporate Social Responsibility (CSR) activities. Collectively, these trans-global players have provided a strong impetus for educational and social reforms spurred by technology as the countries in the region have sought to reflect their legitimacy as serious players in the globalized knowledge economy. Yet the social conservatism of much of the population in the Middle East has acted as a brake upon the higher and wider ambitions of the educational and social reform programmes.

Technology-related educational reforms, as we have seen in the previous chapter, can be seen to have had little impact when they confront the stark reality of life in the conventional custodial classroom in government schools in the Gulf region. As the research has indicated, the influences of social conservatism are of much greater significance than the future imaginings of aspirational policy making in respect of educational technology. In terms of Michael Peters' (2010) definition of the three aspects, or elements, of the knowledge economy – creativity, learning and openness – upon which this research was conceived, the empirical findings indicate that in hardly any respect have these elements been enhanced by the educational technology policies and their subsequent enactments in the Middle East in general, and in Bahrain, in particular. This is consistent with a post-colonial interpretation, since each of these “knowledge conditions” can be seen as being reflective of a particular “mode of existence” based upon Western neoliberal, neo-platonic principles and beliefs, as Latour has adumbrated in his most recent work (2013) Yet these matters are far from clear cut; as Latour has observed “we have never been modern” (1993) and, even

though the deists in Europe strongly challenged the established Christian churches in Nineteenth Century Europe (Barnett 2003), the organized religions have maintained a strong presence in the Global North. The difference between the Global North and Islamic world in the Middle East is that, in the former, the social forces of secular rationalism have eroded the supremacy of organized religion in defining and upholding public morality, and religious dogma has been unable to prevent the march to modernism through successive scientific and technological revolutions. Whereas in the Islamic world of the Middle East, the rise in religious fundamentalism, which was catalysed in 1979 by the Islamic revolution in Iran and rippled across the Gulf into the Arabian peninsula, have sought to reject this very modernism and scientific certitude as a colonial artefact, and, at least some, have endeavoured to promote an Islamic science, which has its supposed roots in a mystical Sufist past (Zain 1990, Sardar 2004).

7.2 Islam and modernism

It has been argued (Habib 2008) that early Muslim civilisation was open to reason, logic and critical thinking. Habib asserts that, at this stage, the arbiters of belief accepted that new knowledge could be discovered through scientific observation and theory. Recent developments in the Islamic world, especially since the Islamic revolution in Iran in 1979 (ibid), have, however, taken an increasingly fundamentalism viewpoint. The Salafists have favoured a closed and inward looking world view that restricts itself to a literalists reading and interpretation of the Qur'an. One aspect of this trend is evident in those, such as Sardar (ibid) who have sought to "islamicise" science, since they see modern science as antithetical to Islam and consequently their route has descended into obscurantism and xenophobia.

contrasting views from the Arab world as to what constitutes enlightenment

The philosophy and beliefs of the European Enlightenment thinkers such Diderot (1713-1784) and Condorcet (1713-1794) form a stark counterpoint to those of their almost exact contemporary Abdul Wahab (1703-1792), whose reform movement and followers were highly influential in re-shaping the beliefs and religious practices of the peoples of the Arabian peninsula, to a emphasise more fundamentalist interpretation of the Islamic Law. During that historical period, through the Eighteenth Century, similarities can be drawn between the social conditions of the Europeans and the

Arabs insofar as they were each living under feudal conditions as subjects of autocratic rulers, but the radical alternatives offered by the European philosophers in order to challenge the unjust conditions were in direct contrast to those of the Wahabists. The European thinking was to lead to the French Revolution and, ultimately, the constitutional enshrinement of freedom of thought and democracy in Europe. For the peoples of the Middle East the Wahabist philosophies sought a return to resolute monotheism and an absolute theocracy. In the Eighteenth Century the European philosophers were railing against the social injustices arising from absolute monarchies (Calhoun 1992). whereas the Wahabists, living in a unified caliphate as part of the Ottoman Empire, were intent on removing the practices, which they regarded as decadent and anti-Islamic, that the colonial Ottoman rulers had allowed to develop. The Wahabist movement was aimed at “cleansing” the Arab Bedouin from the influences of Sufism and the Shia practices of revering deceased Imams and visiting their shrines as places of worship. This perceived polytheism was denounced as heretical by the Wahabists. They focused on the Islamic principle that there is only one God and His Word was conveyed to earth by the Prophet Mohammed and that this is enshrined in the Holy Qur’an and the Hadiths of the Prophet from which all the rules for living, family relations and jurisprudence are derived. Wahabists believe in the literal truth of the Qu’ran and the infallibility of the Prophet.

Just as the imprint of democratic accountability and enlightened governance informed educational reconstruction after the Second World War, and influenced the policies and pursuits of an American-inspired social reconstruction of Western Europe and Japan, so the practices and policies of governments and Arabic regional inter-governmental organisations, such as the Arab Bureau for Education in the Gulf States (ABEGS) and the Gulf Cooperation Council (GCC), were strongly influenced by the Wahabist philosophy which has been, and remains, so prevalent in Saudi Arabia.

At the heart of education and social reforms that aim to modernize the countries in the region is the Arab states’ implicit belief, when entering into partnerships and liaisons with the SNO, that it is possible to embrace Western technology without accepting Western values. This is somewhat counterintuitive, and at least one Arabic commentator believes it to be naïve (Hamad 1999). Indeed, history indicates that it is seldom possible to have modernisation, technology, urbanisation and the reform of government bureaucracies without accepting the cultural values attached to these manifestations of the Global North (Turner 1994). Yet the roots of the divergence are still deeper than this. The very *raison d’être* and the principles upon which an

organisation such as UNESCO was founded, and which have shaped the world since the middle of the Twentieth Century, have been rooted in world view which has been predominated by the USA.

Imperialism and the formation UNESCO

The rising influence of the neoliberal transnational imaginary is evident by the way in which formerly politically 'neutral' advisory entities have begun to favour a particular policy agenda on the basis of an ideology, rather than through evidence-based research. In Chapter 2 evidence was cited, through Susan Robertson's (2007) work, that this shift represented a move away from advising, reporting and coordinating, to an actual involvement in policy making and advocacy. UNESCO founded, as it was, in 1945 in order contribute towards 'peace and security by promoting collaboration among nations through education, science, and culture', was very active in Bahrain, in the early years of this millennium, in establishing the justifications for the KHSF. It quotes 'good European experiences' (see Appendix 3) in integrating ICT in education as a strong reason why computers in the classroom are indispensable adjuncts to educational advancement (though no evidence is provided of these 'good European experiences'). Despite more than ten years of failed education policy enactment in Bahrain, the UNESCO meetings in Paris still provide a forum for the education minister in Bahrain to promote, on the international stage, the 'success' of eLearning in the Kingdom (Nouaimi 2012). Yet as we have seen there is little evidence in government schools in Bahrain to substantiate the minister's bold assertions and UNESCO has not itself conducted any surveys the Bahraini schools to discern any basis for this hubristic hyperbole.

A brief examination of the circumstances surrounding the foundation of UNESCO may be instructive at this point. As the Second World War was drawing to a close, the Americans were very keen to be involved in the post-war reconstruction of the education systems in Europe in an endeavour to prevent extremist ideologies being promoted – with reference to the state school's promotion of Nazism in Germany in the inter-war years from 1918 ((Dorn 2006). A keen advocate of this directing and interventionist role in social policy was Grayson N. Kefauver, Dean of Stanford University's School of Education (ibid), his impulse in 1944 was that the Allies should simultaneously 'support' and 'control' German educational reconstruction. Earlier, in 1942 several of the Allied nations who were, already at that time, planning for a post-war future had formed the 'Conference of the Allied Ministers of Education' (CAME) and they pleaded with America for the funding of their work. Kefauver was keen to

accede, but the Allied advance in the occupied Europe in 1944-5 was so swift and extensive that the American State Department were reluctant to commit their government to such another expensive endeavour in respect of the post-war reconstruction of the shattered education infrastructure in Europe (De Capello 1970). The American delegation to CAME, therefore, ensured that UNESCO was conceived, less as directive organisation overseeing the reconstruction of education in Europe, but more of a coordinating body, an information exchange and a cultural facilitator. Indeed the International Bureau of Education, funded by UNESCO, remains an invaluable repository of education systems throughout the world.

The recent rise then of UNESCO, as an advocate of the Washington Consensus, and with a strong influence on policy-making, represents something of a rich irony. Though it was starved of funds from the US treasury at its conception – despite the pleas of the European Allies – it now provides an important role in the promotion of US corporate hegemony. Through its uncritical promotion of educational technology and, under its aegis, the increasing presence of US global management consultancy and IT companies.

7.3 The Great Divergence

Michael Thompson (2010) identifies two distinct divergences between Western development and the Islamic world – one socio economic, the other politico cultural , both of which have handicapped the development a civic society which, according to Thompson, could have led to more sustained and successful challenges to the autocratic rule which has been the norm for so many of the countries of the Middle East, and is certainly evident in the behaviours of the ministries of education in the region. This would, Thompson argues, have enabled a form of freedom and democracy to develop which was less antithetical to the globalized world to which the leaders of the many governments in MENA are drawn.

Socio-economic divergence

Thompson (2010) argues that the lack of a private sector in the economy has prevented a sphere of civil society from forming which would act in opposition to authoritarian governments and institutions. In doing so, he cites research from both Western and Middle Eastern authors (Bellin 1994, Anderson 1995, Zubaida 2001, Ibrahim 2002). These arguments take the governmental institutions as the primary structures which have restricted the growth of democratic movements and modern

forms of agency, the most significant of which might be seen as development of a “merchant class”

Timur Kuran (2012) asserts that it is Islamic law which ‘held back’ the Middle East. In the Twelfth Century in Toledo Christian, Jewish and Muslim communities co-existed peacefully, as they did in many parts of Spain (Al Andalus) at that time. But as successive waves of Aragonese and other crusaders over the next 200 years pressured the Islamic Iberian peninsula into increasingly small and isolated communities this mixing of the different confessional communities dissipated.

In the late medieval period, when mercantilism was taking root in much of Europe there were several impediments which limited the Islamic states’ capacity to compete. Interpretations of Islamic law were such that, for example, there was no notion of a company having a legal entity to enable it to, for example, trade and borrow money; all business was done as partnerships and when a partner died the partnership had to be dissolved. Organisations known as waqfs existed as charitable entities to do good works in the community, but these too were bound by a tradition and could not deviate from the stated intention of those setting up the waqf in the first place and was not set up as a profitable business. All three of the Abrahamic faiths forbade the charging of interest on loans – the sin of usury – but the Christian and Jewish communities eventually found a way to accommodate profits being made through the trading of money – the Islamic code did not adapt to changing circumstances in the same way and, therefore, had to resort to elaborate mechanisms to create viable commercial operations. In the late Twentieth Century the notion of Islamic banking has entered the argot, but several commentators (Saikhali 2003, Maurer 2005, Akbarzadeh 2006) have noted that the arcane structures that have been set up so as not to seem to be trading in money and paying interest amount to no more than an elaborate exercise in casuistry. In the Thirteenth and Fourteenth Centuries Arabic commercial centres such as Aleppo, Damascus, Alexandria and Cairo, the Christian and the Jewish communities were encouraged to mix with communities in the Arab states and they even had tax advantages to operate commercially; the Muslim communities did not enjoy the same freedoms in the great Western trading centres of Italy and northern Europe, indeed such alien communities were not welcome.

Epistemological and politico-cultural divergence

It is the assertion of several scholars (Keane 1988, Seligman 1992, Gellner 1994, Kumar 2001) that the development of civil society and the notion of an autonomous

sentient populous who have the capacity to erode the power of the authoritarian state is an essential pre-requisite for democratic change and that without this societal development any change will have shallow roots and be short-lived. Additionally, Islam as a religion is seen as having a value system that is anathema to modern forms of politics. This theory sees the problems of Islamic societies as grounded in the religious value system and cultural practices and the ways that these forces shape nondemocratic, authoritarian institutions (Barakat 1993, Korany 1994, Fish 2002, Zakaria 2003).

Central to the argument is an appreciation of the struggle between religious belief , rational thought and scientific positivism that was observed in Europe from early in the Eighteenth Century (Gerth and Wright-Mills 1948). In the current age of global insecurity which is linked, by some commentators, to the rise religious fundamentalism, it should be recognised that it is not a religious belief *per se* which is an impediment to modernisation; rather it is the inseparable bindings between religion and state or religion and political power that result in a situation where authoritarian regimes justify their legitimacy through invoking religious doctrine and rulers are happy to operate under a cloak of theocracy, as a validation of their policies and their actions. Whilst there is undoubtedly a tension between religious fundamentalism and the modernist project, the strength of religious faith in a country such as the USA, the epitome of the modernist project, is testament to the possibility of a constructive co-existence to be possible between those who hold to the mystery of faith and the modernist certitude of science (Latour 2013).

However, it would be inaccurate and misleading to characterise the developments in Islamic thought in a simplistic essentialist way. A dynamism has always existed within the Islamic faith between the more liberal and mystical Sufi strand and the more conservative and fundamentalist Salafists. The author and Islamic historian Bassam Tibi (2002) speaks of the existence of the seeds of an Islamic Enlightenment in opposition to a fundamentalist concept of divine order. He sees this enlightenment as being based upon the Sufi regard for Ibn Arabi, the reason-based orientation of Averroes, coupled with Al Farabi's concept of order (Macy 1986). These intellectual schools being placed in an historical and philosophical context through the teachings and writings of the philosopher and social historian Ibn Khaldun (1332-1406) (Mahdi 1971). Gutas (2002) rejects the idea that logic and rationalist thinking in the Islamic world ended in the thirteenth century with the teachings of Al Ghazali (Kamali 1963). Gutas asserts that dualism i.e. rationality and religion living happily alongside each

other in the Arab world, has always been, and continues to be present in the Islamic world view.

7.4 A shared humanity – post-colonial possibilities

Acknowledging the shared, though contested, heritage of the peoples of the Middle East, with those of their European and American counterparts it may be possible to look forward to an approach to education reform which did not involve the rejection of an Islamic epistemology. A helpful postcolonial perspective is provided by the sociologist Boaventura de Sousa Santos(2013). Santos seeks to demonstrate how Western knowledge and claims to power have an effect of dismissing all other ways of knowing as if they were non-existent. He cites, for example, the Western view of time, Western aesthetics and high culture and a “logic of productivity” in which economic growth becomes the sole criterion by which development and progress are evaluated (Tinkly and Bond 2013). By decentring modernist metanarratives, Santos charts an ‘epistemic shift’ where, by focusing on the unstable, hybrid and fractured nature of colonial and post-colonial identities (Bhabha 1984), the fluidity and historicity of cultures challenges the view that cultures are “hermetically sealed essentialised and static entities” (Tinkly and Bond *ibid* :425). Whilst not completely dismissing the rejection of ‘rationalist knowledge’, in his *ecology of knowledges* (2007) Santos sees a solution to the supposed superiority of scientific discourse and its attendant denial of alternative forms of knowledge, by promoting an interdependence between scientific and non-scientific knowledges.

In this way the interplay between structure and agency, which framed the interpretation of the research findings in Chapter 6, can be redrawn so as not to be a reinforcement of a straightforward dichotomy. This dichotomy, which can be seen to frame the issue from an essentialist perspective, between the sophisticated democracies of the Global North, where the balance of agency and structure is ‘correct’, and the recidivist and authoritarian regimes of the Middle East which have an ‘incorrect’ balance which is weighted too far towards ‘structure’ at the expense of ‘agency’, can be translated to allow for “mutual intelligibility among experiences of the world [which are] both available and possible.” (Santos, *ibid* 2013 :58)

7.5 Conclusions –structure and agency in technology integration

As this study has proceeded the frame of reference has grown wider. What was originally conceived as a study into the use of educational technology in the classroom has developed into a critique of neoliberal policy enactment in a post-colonial setting. To conclude I would like to readjust the focus and once more concentrate upon of educational technology policy enactment at a school level. I would contend that, irrespective of cultural differences, there is a set typical human behaviours which are identifiable when confronted by ‘systems driven’ change. These were outlined in section 6.4 of the previous chapter. Despite their geopolitical and cultural differences, the life and work of a teacher in the Middle East has a great deal in common with the daily experiences of their counterparts in the Global North. In respect of technology integration many of the issues are precisely the same. Torin Monahan’s (2005) vivid account, at a school district level, of a school technology project in Los Angeles and the lack of impact he witnessed could equally well have been transplanted to an urban school in Bahrain. Many of the norms, expectations and frustrations are precisely analogous.

Much of the advice and about the nature of the educational reforms in Bahrain, and the recommended implementation strategies have come from Singapore. Yet the extensive experience gained, and the detailed strategies for implementing the ‘Future Schools’ project, has not featured in any aspect of the KHSF project. Two Singaporean colleagues, who have been personally involved in the 6-year journey to realise the ideals of the a future school are Lee Yong Tay and Cher Ping Lim (2013:x) These action researchers identify four indispensable elements which are pre-requisite to a successful and transformational implementation of educational technology as follows:

1. A sustainable one-to-one computing learning environment through a computer ownership programme;
2. Access to readily available, easy to use and free software applications;
3. Enhanced pedagogical practice through constant professional development and practitioner research;
4. The transfer of innovative ICT practices with the wider teaching fraternity

Above all the authors stress the absolute importance of having committed and capable individuals as the single most important success factor for sustainable innovation coupled with strong leadership and high levels of technical and pedagogical knowledge and skill.

None of these pre-requisites exist in respect of the KHSF project in Bahrain. The socio-political environment in Singapore is very different to that which pertains in the Arabian Gulf states. Notwithstanding the keenness with which policy makers have been to retain the services of educational advisers from Singapore, the relevance of these policies has seen to be highly questionable within the very different socio-political milieu of a late-developing rentier state caught in the throes of a sectarian conflict, an economic crisis and a resurgence of Arab nationalism. However, as this account has indicated, in many respects the KHSF **policy** has fulfilled a very real purpose as a material-semiotic actor. It has served to burnish the credentials of the Minister of Education and enabled him to address UNESCO meetings with authority and conviction about the success and progress of the King's technology project. In this way, along with several other ministers of education from across the world he has been able to project an image of a modern, and forward looking country in pace and quite at ease with the integration of technology and eGovernment into every corner of their citizens' lives. In this way there is a wish-fulfilment of a neoliberal imaginary which is closely attuned to the increasingly merged agendas of the SNO and global conglomerates whose influence on education policy-making across the world continues to grow inexorably (Ball 2012).

Endpiece

Rather in the same way as the KHSF policy has had a life of its own and travelled through the corridors of power and onto the world stage at UNESCO conventions in Paris and throughout the Middle East region, so this research thesis has travelled with me in my six years in the region. As my own project has accompanied me in various work roles in Jordan and the Gulf states of Dubai and Bahrain, the research focus has changed and morphed to reflect my social cultural and working environment. Just as the KHSF project began as an initiative about technology in the classroom and over its years of existence has become a vehicle for the projection of government and SNO policy aspirations, so my own research, which was initially rooted in a positivist investigation into the impact upon educational technology upon learning, has shifted to become an ethnography about the conflicts which assail policy enactment in the lively and challenging environment of, what is increasingly referred to, internationally, as the K-12 classroom. My nomenclature itself has changed, and this is surely a reflection of the increasingly standardized global education environment within which researchers in comparative and international education (CIE) have now to operate. The emerging picture is one that represents the hegemonic influence of the USA at so many operational and cultural levels. As I have argued throughout this thesis, the eponymous Knowledge Economy, which was spawned in the USA, can be seen to be the pinnacle of the European Enlightenment and, in one sense, if it were a reality – rather than chimera that often is - a triumph of rationalism over superstition. I believe that Fukayama's End of History discourse, was not so much hubristic as sadly prescient of a world where Homus Economicus is imagined to be a true and accurate representation of the human condition. Yet the Middle East has always been a stubborn and irritating exception to the philosophies of the "enlightened" American hegemon. Despite the unwavering support given to the hereditary monarchies of the Gulf States by the USA, their adherence to and acceptance of the value systems of the Global North has been only at a very superficial level. There has always been a deep reluctance, even antipathy, to embrace fully the rationalist discourse and the associated (inevitable, as they see it) descent into utilitarianism, decadence and decay.

Tribal and family values and the Islamic faith in the Middle East have been shown repeatedly over the past 300 years or more to be much stronger than the rationalist impositions of the colonial and imperial powers to which the region has been subjected. Moreover, the European enlightenments, each of which had its slightly different flavour in England, Germany and France were much more nuanced, much more rooted in a

past which shares a great deal in common with the world of Islam, than is the case of the juggernaut of American imperialism, in all its guises, from the World Bank, to the neoliberal agencies of the United Nations, such as UNESCO. As noted earlier in this account, in Twelfth Century al Andalus, the philosopher Averroes was a contemporary with, and is said to have been influential in the foundational thinking of St Thomas Aquinas, one of the revered philosophical fathers of the Catholic Church. As Ian Almond (2013) reports in his book "One Banner Two Faiths" Islamic and Christian soldiers fought side by side in many European battles from the Eleventh to the Nineteenth Centuries. We share a common past and there is as much in common between the peoples of Europe and the Middle East as there is that separates the Occident from the Orient through a veil of suspicion and xenophobia.

My interviews with school leaders together with the focus groups reveal a level of professional discourse, a commitment to their students, and an understanding of the nature of power, transformation and policy enactment which are the equal of any similar consultation taking place with education professionals from the advanced Western education system. For example, the frustrations which school leaders experience in Bahrain in trying to enact educational technology policy and reconcile this with the global performative agenda (aka TIMSS and PISA) are so redolent of the experiences of headteachers in the UK who have to reconcile a growing array of achievement measures with an expectation that schools should also embrace a Twenty-First Century skills agenda encompassing innovative teaching and technology integration.

In my own modest way I have continually sought to decouple the lazy synthesis of 'education + technology = innovation'. During the early part of my empirical research in the Middle East I visited a school in England where I had been advising some years previously in the early design and consultation stage as a 'Building Schools for the Future Pathfinder School', and which was then fully operational in its stylish new premises. Although a sophisticated technology infrastructure had been installed as part of the building's specification, in practice, the internal information architecture was so unreliable and riddled with faults that only the courageous staff dared to rely upon technology for teaching and learning. However, at least, the internet connection at the school was fast and robust, and the building's architecture sought to maximize the available space productively; there were no corridors, but, between clusters of classrooms, large breakout spaces filled with low-cost, thin-client PCs where students

could do private study and get along with their own research, or which teachers could use for small group work from their adjacent classrooms.

At a conference of the Gulf Comparative Education Society in 2012, which we hosted from the Bahrain Teachers College, I presented a brief paper entitled, provocatively, “ICT and Innovative Teaching – what’s the connection ?” which shared some of the preliminary findings from KHSF consultations and contrasted these with these modest architectural features in the new UK school which facilitated some, frankly, rather mundane use of educational technology within a conventional school setting. The conference paper was received as if some sort of revelation had been visited upon the delegates. I subsequently posted my paper on the Academia.edu website where I have since had over 500 downloads of the document. In its discussion section, the paper concludes that there *is no automatic connection* between educational technology and innovative teaching (see also Tay and Lim 2013) ; rather it is about careful preparation, considered pedagogy and pragmatic utility. Hardly an original conclusion, but one which I continue to make in an endeavour to prick the techno-delusions of future gazing political rhetoric to which many education systems are subjected in the information age.

In the preface to this thesis, I referred to my own nagging research question which hovered over the early part of research, namely that of the “technology leapfrog” effect. What has become increasingly clear over the course of this research project is that no such leapfrog exists. Technology itself cannot be a substitute or a quick fix to the problems which beset education and social change in the Late Developing Countries. As Neil Selwyn argues (2010), for these changes to take root, much deeper institutional reform and more rigorous analysis of current practice, must take place rather than speculating about technology-enriched educational futures.

Future Directions

The background research and the writing of this thesis have been substantial undertakings; the narrative and analyses have taken me into unexpected areas of scholarship. As I see it, my future research could be pursued in one of three possible directions.

SNOs and Global Policy

At a policy level, there would be great value in researching further into the operation of the SNOs, and their changing role from one of support and coordination to one that involves policy advocacy and formulation – this is an area of scholarly interest since,

with the inexorable impetus of globalisation, these institutions are increasingly influential and, in many ways, more powerful than state governments, yet they are, on the whole, undemocratic. They can frequently be seen as representing the commercial and vested interests of the Global North whilst giving insufficient weight to the needs and demands of the LDCs.

Islam and the West

In these times of global strife, where most of the worlds conflicts can be seen to have their roots in religious beliefs that appear to be in opposition, it would be of value to trace the roots of fundamentalism and seek the seeds through which reconciliation may be planted. The historical, social and cultural research elements of this thesis revealed the significant amount of common ground that exists between the traditions and epistemologies of the Global North and those of the Islamic world. It is becoming increasingly evident that the issues confronting today's conflicted world have their origins not in oppositional faith communities but as post-colonial constructs. The Middle East, in particular, is a region where improvements in state schooling through culturally sensitive education reforms involving a dialogue with the faith communities, could yield improved academic for students and could be a catalyst social transformations in the region. To continue to research and chart the development of these education reforms and social reforms in the region would be of particular scholarly interest.

The March of the MOOCs

Even in the relatively short time it has taken for this research thesis to be formulated and drafted, education technology has marched inexorably forward into the era of Massive Open Online Courses (MOOCs). As with any technological innovation, there is much hyperbole and techno-fantatising surrounding the development of these open-access courses. Early findings in respect of poor student persistence and course completion are likely to be a reflection of implementation issues rather than inherent issues with the courses or the very concept of MOOCs. As connectivity and bandwidth improve across the world, universal access is becoming increasingly realisable, especially where innovative pedagogy can embrace telephony and mobile computing. This is a vast area to research and there are all already several tantalising avenues to pursue.

Which of these three routes I will take is, at the moment, unclear; much will be determined by my professional commitments and opportunities. Whichever route emerges, a common thread will always remain as "Education Reform for the Knowledge Economy".

Appendix 1) – The education system in government schools in Bahrain

Principles and general educational objectives

Several basic principles have governed curriculum development in Bahrain. The Education Law Project 1989 decreed that the curriculum should be geared towards the future prospects of Bahrain, and the major issues in the Arab world. The curriculum should take into account the latest educational and psychological research and base the improvement and renewal of the system through the piloting of curricula and detailed evaluation through continuous field studies. The aim has been to enable the learner to comprehend modern sciences and to raise his/her technical competency both theoretically and practically. The curriculum is designed to be flexible and innovative and encourage “self-access” learning through access to educational technologies such as computers, the Internet and multimedia. Finally, through civic education, the aim has been to clearly specify the roles of government sectors and society to ensure interaction harmony, and collaboration within the education sector. The educational objectives are outlined and summarised in the table overleaf. For the purposes of this narrative, the educational objectives have been categorised as follows: -

- Personal, social and life skills;
- Religious and racial identity;
- Instructional & developmental; and
- Economic.

It may be noted that in this published document and the weight of the text that there is a strong emphasis placed upon the development of the students’ social and life skills and the promotion of their religious and racial identity. The instructional, developmental and economic objectives are less clearly defined and are fewer in number.

EDUCATIONAL OBJECTIVES FOR THE BAHRAINI NATIONAL CURRICULUM

Category	General educational objectives	Additional objectives for secondary education
Personal, social and life skills	Provide the opportunity for each individual to develop his/her abilities, skills and attitudes to achieve a better quality of life, and to prepare him/her for co-operative life in work and employment fields.	Prepare the student, physically, mentally, morally, socially and nationally to be a mature individual and a good citizen.
	Ensure the development of the individual within the group, physically, mentally, emotionally, socially, morally, spiritually, and according to his/her ability, with due regard to individual differences.	
	Develop the concepts of education for peace, international co-operation, and solidarity based on justice, equality, mutual respect and interaction amongst states and nations.	
Religious and racial identity	Inculcate the Islamic faith, emphasizing its role in the integration of the individual's personality, the unity of family and society, and their co-operation, and demonstrating the Islamic role as a comprehensive way of life suitable for any time and place, and its ability to cope with the demands of time.	
	Inculcate pride in belonging to the Arab and Islamic nations based on the awareness of the genuine value of Arab Islamic thinking, its historical role in developing human civilization and the advancement of science and art, and the awareness of the potentials of the Arab nation, and its ability to achieve progress and unity	
Instructional & developmental	Develop individual critical thinking and sound judgement with good application.	Educate him/her in the arts and sciences in order to prepare him/her for higher education.
Economic	Ensure economic and social progress by providing sufficient and capable skilled national manpower.	Prepare the student for life in general by providing him/her with sound values and knowledge about scientific trends, and the ability to solve problems of contemporary life, so that, after receiving vocational training, he/she can become a productive member of society

The table below indicates the way in which the state education system is organised in the Kingdom.

Structure and organisation of the education system

STRUCTURE OF THE EDUCATION SYSTEM IN BAHRAIN

Age	6	7	8	9	10	11	12	13	14	15	16	17
Grade	1	2	3	4	5	6	7	8	9	10	11	12
	First Cycle			Second Cycle			Third Cycle					
	BASIC EDUCATION									SECONDARY EDUCATION		
										scientific track		
										Literary track		
										applied studies track		
										technical education		
	grade	grade	grade	grade	grade	grade	grade	grade	grade	religious secondary education		
	1	2	3	4	5	6	7	8	9			
	Religious primary and intermediate education											

The secondary education system consists of three years of study over six semesters

Pre school education

The government does not provide any pre-school education; all the provision is from the private sector with licensing provided by the Ministry of Education for children aged 3-5. Nurseries cater for children aged less than 3 years of age and these establishments are under the supervision of the Ministry of Labour and Social Affairs.

Although the government does not provide pre-school, or kindergarten, education it sets out certain objectives which it expects private sector operators to follow – such as promoting the child’s mental, social and physical development, establishing their self-sufficiency, and preparing them for the next stage of education.

Basic education – primary and intermediate

Basic education is provided for all children, both native-born and expatriate. It consists of nine years of education divided into three cycles, the first two cycles normally being taught in a single establishment. In the first cycle, grades 1-3, students are taught all subjects by a generalist class teacher (except for English, technology, physical education and music), from the second cycle onwards the students are taught in most subjects by subject specialists.

There are separate schools for boys and girls with a policy that the teaching staff should be of the same gender as the students they are teaching. However in many boys' primary schools they are managed by women with predominantly women teachers, up until the end of Grade 5, when the students are less than 11 years of age. The primary reason for this is the shortage of male teachers at this phase, due to the poor wages and social status of primary education amongst men. Women, however, are forbidden to teach boys from Grade 6 onwards, and Islamic Education is always taught by men in both boys' and girls' schools.

The Ministry of Education's directions regarding the primary education curriculum emphasise the importance of students' experiencing and internalising the subjects. There is an expectation that subject topics should be integrated, and that they should practise scientific thinking and problem solving.

In Cycle One, (Grades 1-3), the instruction is performed by generalist class teachers, who have no specific subject specialism. The teachers evaluate students' performance through continuous assessment of planned activities, individual and group projects and through diagnostic tests. Students' whose assessments are satisfactory are permitted to proceed to the next phase.

In Cycles Two (Grades 4-6) and Three (Grades 7-9) of basic education, where the subject-teacher system is applied, students are evaluated through regular systematic observation and a final examination at the end of each semester. In order to pass, and proceed on to the next grade students' overall score must be at least 50 per cent in each subject. In the event of failure, students are allowed to repeat the final examination on a single occasion; failure at this stage results in the student having to repeat the previous grade for one time only. Students who fail at the Intermediate level (at the end of Grade 9) are allowed to sit the examination as external candidates.

At primary and intermediate level (Grades 1-9) the school year consists of 170-172 working days (or about 34 working weeks), at least 20 days of which are given over the assessment and testing.

Basic education: weekly lesson timetable

Subject	Number of weekly periods for all subjects in each grade								
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
Islamic education	3	3	3	2	2	2	2	2	2
Arabic language	9	9	8	7	7	7	6	6	6
English language	-	-	2	5	5	5	5	5	5
Mathematics	5	5	5	5	5	5	5	5	5
Science & technology	2	2	2	3	3	3	4	4	4
Social studies	1	1	2	2	2	2	3	3	3
Family life education	-	-	-	1	1	1	-	-	-
Fine arts	2	2	2	2	2	2	-	-	-
Practical studies	-	-	-	-	-	-	3	3	3
Physical education	2	2	2	2	2	2	2	2	2
Music	1	1	1	1	1	1	-	-	-
TOTAL WEEKLY PERIODS	25	25	27	30	30	30	30	30	30

Secondary Education

Students are admitted into secondary education having successfully completed the Intermediate School Certificate at the end of Grade 9. There is a choice of four tracks as follows:- scientific, literary, commercial, applied studies and technical. In practice students are encouraged along particular tracks depending on their academic performance, with the highest achievers encouraged to pursue the scientific track. Within the applied studies curriculum there are five branches:- agriculture and livestock resources (for boys only); printing (for boys only); graphic design (for girls only); textile and clothing (for girls only); and hotel management (boys only). A total of 156 credit hours is needed to graduate for all tracks except technical, where a total of 180 credit hours is required one credit hour is the equivalent of 15 taught periods of 50 minutes each). At the end of the Secondary level, the successful students are awarded the General Secondary School Certificate.

Religious education is offered by a specialised institute under the responsibility of the Ministry of Education. It is for boys only. This type of education is broadly the same, in terms of content and duration, as the basic and secondary education, but an emphasis is placed upon Islamic studies to prepare men with an appropriate background in religious affairs. Successful students are awarded the General Secondary School Certificate, Religious Branch. In 2003/4 there were 610 students enrolled in the religious institute.

The three-year, six-semester courses follow the different tracks of scientific, literary, commercial, applied studies or technical, as identified in the previous section, but with some common elements as follows:-

Core courses – these are characterised by variety and integration, ensuring a common core of general knowledge which is studied by all students. They include a sufficient amount of information and skills and they are aimed at encouraging the student to continue their study with independence and self-motivation. The percentage of core courses out of all study requirements is 45 per cent for scientific, literary, commercial studies tracks, and 25 per cent for the technical track.

Specialised courses – these are a group of courses that students must study in one track (as a major course). The percentage of specialised courses out of all study requirements is 39 per cent for the scientific, literary and commercial tracks; 45 per cent for the applied studies track; and 69 per cent for the technical track.

Elective specialised courses – these courses are directed towards a specialisation, or are linked to a specific field of knowledge. The percentage of these courses out of all study requirements is 8 per cent for the scientific, literary, and commercial tracks; 5 per cent for the applied studies track; and 3 per cent for the technical track.

Free elective courses – the objective of these courses is to enrich the curriculum, satisfy the students' interests and talent, and achieve the balance and integration between all other core and specialised courses. The percentage of these courses out of all the study requirements is 8 per cent for the scientific, literary and commercial tracks; 5 per cent for the applied studies track; and 3 per cent for the technical track.

Since 2005 there has been a policy to introduce a unified track system (UTS) with an aim of overcoming the previous divisions created by the system which created separate scientific, literary and commercial tracks to provide core courses for all students for 60% of the curriculum time with electives for 40% of the time. The new

system is intended better to match the school's provision with the needs of society and the market (2009)

The daily timetable consists of six periods of fifty minutes each in all secondary schools. The yearly curriculum content and time allocation for each subject is itemised on the next page.

Secondary Education: yearly curriculum content and time allocation

(30 X 50 minute lessons per week 26 taught weeks per annum)

Subject	Number of yearly taught periods in each grade					
	Grade 10		Grade 11		Grade 12	
	Literary	Scientific	Literary	Scientific	Literary	Scientific
Core courses						
Arabic language	90	90	90	90	90	90
English language	90	90	90	90	90	90
Islamic education	40	40	40	40	40	40
Science	30	30	30	30	30	30
Mathematics	30	30	30	30	30	30
Social studies	30	30	30	30	30	30
Physical education	30	30	30	30	30	30
Family life education	10	10	10	10	10	10
Sub-total	350	350	350	350	350	350
Compulsory specialised courses (science track)						
Mathematics	-	90	-	90	-	90
Physics	-	90	-	90	-	90
Chemistry	-	60	-	60	-	60
Biology	-	60	-	60	-	60
Geology	-	10	-	10	-	10
Elective specialised courses	-	60	-	60	-	60
Free elective courses		60	-	60	-	60
Sub-total	-	430	-	430	-	430
Compulsory specialised courses (literary track)						
Arabic language	70	-	70	-	70	-
English language	60	-	60	-	60	-
Islamic education	20	-	20	-	20	-
History	50	-	50	-	50	-
Geography	50	-	50	-	50	-
Economics	20	-	20	-	20	-
Sociology	10	-	10	-	10	-
Philosophy	10	-	10	-	10	-
Psychology	20	-	20	-	20	-
Elective specialised courses	60	-	60	-	60	-
Free elective courses	60	-	60	-	60	-
Sub total	430	-	430	-	430	-
Total annual periods	780	780	780	780	780	780

Assessment and evaluation

The evaluation system summarises students' achievement and performance in each course. The system uses several methods to arrive at a final grade. Firstly, 30 per cent of the final grade is based on continuous assessment carried out by the teacher throughout the semester, in the form of oral and written classroom assignments. A mid-semester examination contributes 20 per cent of the final grade. The remaining 50 per cent of the final mark is made up of the students' performance in externally set and marked tests from the Ministry of Education.

At secondary level the school year consists of 155 working days (or 31 working weeks). At least 20 days are taken out of the curriculum time for testing, this accounts for the discrepancy with the 26 taught weeks indicated on the previous table.

Appendix 2)

The Education Reform and Improvement Agenda Established by McKinsey & Co September 2008

Taken from a ministerial briefing document

“Bahrain's school system reform programme - discussion document, 31 July, 2008”

Reform themes

- Ambitious and shared vision for excellence
- Student focused school leadership and management
- Teaching that drives Student learning and development
- Developing our teachers
- Learning for work
- Ensuring all schools are creating a safe environment for learning
- Setting high performance standards in schools and forming active partnerships between the MoE and the schools for performance accountability
- Support schools to perform

Change in culture advocated

From entitlement to meritocracy:

In a recent survey of the Ministry's top several levels, 73 per cent of respondents did not believe that clear links existed between performance and consequences. If our leaders do not see the link, then it is unlikely that staff will have the motivation to strive for excellence.

From individualism and secrecy to collaboration and transparency:

Today, members of the Ministry's top team describe the Ministry's directorates as 'islands without bridges'. These bridges must be built, and information must be made accessible to people who need it to support our students. For example, a teacher's training needs should be shared and Ministry staff should work together in supporting the teacher. The support that one directorate provides to teachers in the classroom should reinforce the training programmes that another directorate provides in workshops outside of school.

From hierarchy and control to empowerment and accountability:

If we set high expectations for our people then we need to empower them with the rights, resources, and capabilities to meet those expectations. At the same time, from those to whom a lot is given a lot is also expected so we must therefore ensure that we are each held accountable for fulfilling our responsibilities.

From blame and punishment to learning and development:

Criticism is taken personally today, and an organisational culture of blame leads to hiding our weaknesses. A culture of learning and development would welcome input from others, and areas for improvement could then be shared so that they become future areas of strength.

From subjective opinion to evidence-driven decisions:

We have to improve our commitment, systems and skills to use data effectively. Today, we gather large volumes of data without initially clarifying what matters most, how we intend to use the data, and the systems for sharing the data. The cost of this is that a school or directorate receives multiple requests for the same data, we have gaps in the information we do collect, and we do not feel we have access to reliable data to make the policy decisions or fair performance assessments that is our duty as a Ministry. We then lose our focus and our faith in data and make decisions based on

subjective opinion. We need to establish a Ministry that plans its complete data needs and uses ahead of time, efficiently gathers and enables access to information for those who need it, and is comfortable with the conclusions it reaches on analysing this data. The benefits will be greater effectiveness and in our work, more transparency and clarity about how decisions are made, and a greater sense of fairness among those who are affected.

From exclusion and intolerance to respect for all:

Our school system is a microcosm of Bahrain's diversity, and all the richness and challenges that this very diversity produces. We must be a model of the society we are to shape and build. There are people in our system today who feel marginalised, excluded and potentially penalised for their background, ideas, age or gender. Not only is this against our values, but we also can't afford not to harness the energy and creativity of every one of us in pursuing our shared and ambitious vision for country and students. Our school system must become one where everyone feels respected and treated fairly, and is given a chance to participate fully.

From bureaucracy and fire-fighting to strategic action:

It is easy – but risky – to mistake activity for impact. If you enter our Ministry offices or schools, you are likely to see people busily going about their jobs, answering phones, sending faxes, engaged in meetings, writing reports and so on. But the outcomes are not what we would want them to be. Too much of what we do today is either bureaucratic due-process or reactive fire-fighting for situations that have neither been planned nor prepared for. There is a missing link between what we do and what we are trying to achieve, and in many cases that link is clear direction and disciplined strategic action. We must minimise bureaucracy and refocus our time and efforts again and again on those activities that will have the impact we are aiming for.

Having established the objectives and advocating the culture changes necessary to bring about change, the consultants from McKinsey & Co then created a strategy for achieving the objectives. The first part of the strategy was to establish two entirely new corporate bodies independent of the Ministry of Education, one was the Quality Assurance Authority, the other was to create a new teachers college with a newly minted curriculum which was commissioned from the National Institute of Education of Nanyang University in Singapore.

Next there were several specific interventions at a school level (using international consultants) to bring about improvement, through five project teams each with its own theme and led by an international education consultant as follows:

1. Excellent schools:

This team will work collaboratively with Principals, students, and the Ministry to develop a Model of Excellent Bahraini Schools. Each school will be able to use the detailed document that the team has developed to self-assess its performance. The document is a model that describes all of the elements that make up an excellent school. It will provide schools with examples of evidence for each element so that they can do an accurate self-assessment. Once they have identified their areas of strength and areas of development they can prioritise elements of focus, and they will receive support from the school improvement programme and from within their own staff to drive this improvement.

2. School leadership for performance:

The team will (1) support and develop school leadership teams to meet a defined set of the roles, capabilities, and accountabilities needed for excellent leadership in Bahraini schools; and (2) support leadership teams in developing robust approaches to three key leadership functions: strategic planning, budgeting and staff performance management.

The leadership framework will draw on the leadership competencies already developed in partnership with the National Institute of Singapore (NIE) and will define the knowledge, skills, attitudes and activities that characterise excellent leadership in three broad areas:

- Instructional leadership: The ability to generate ‘first-order changes’ that drive improvements in current instructional practice. Good instructional leaders do not need to be experts in all subject areas, but they need to have a mastery of the common elements of excellent teaching and be able to coach others to develop the same mastery.
- Change leadership: The ability to generate ‘second-order changes’ that alter current practices and their supporting systems. Change leaders set an inspiring vision and develop followership amongst the staff at their schools to achieve this vision. They are relationship-

builders, planners and motivators.

- Administrative leadership: The ability to maintain order in school
- functioning such that it enables first- and second-order changes. Though often unduly emphasised, administrative leadership is a necessary, but not sufficient in and of itself, condition for excellence in overall leadership.

The framework will be developed with respect to the teams of people who lead schools. It is not limited to the Principal alone. Though it is important that a Principal have some competency in all three areas, this should not preclude having a model of distributed leadership in which the Principal leans on key leadership team members to provide emphasis or focus on any of the three broad areas (for example, a school business manager might be relied upon to provide most of the drive in administrative leadership, while senior teachers might provide frontline instructional leadership

3. Teaching for learning:

This team will improve the effectiveness of teaching in Bahrain's schools and of the Ministry's support of schools by working collaboratively with teachers to improve practice in a number of common priority areas. Support for schools will be tailored based on the strengths and development needs of each. If one school has urgent needs in a certain area unique to other schools, that area will be addressed. There are a range of areas of support including, but not limited to, classroom management, the five phase cycle of lesson planning, special educational needs, differentiation, and assessment for learning. Because the most basic role of the school is to provide a safe environment, immediate support in the area of behaviour for learning and student safety will be provided to schools that have deficiencies in this area.

4. Developing our Teachers:

This focuses on (1) recruiting top students to the teaching profession and (2) ensuring teachers have a clear career path and development opportunities in teaching. Singapore's National Institute of Education is a close partner to Bahrain in the development of this project, working closely with the team.

To ensure that Bahrain's top students see teaching as a profession of choice, the PSCI (Profile, Selection and Criteria Initiative) has been launched. The PSCI team developed a first-rate publicity campaign called 'Raise Your Hand—Teach'. The campaign, which had mass distribution in the media via commercials and posters, was targeted at students in secondary school and university. The first year of the campaign can be judged a success, having attracted approximately 700 top secondary students and 300 top university students to apply for placements on teacher education programmes at the new BTC. The PSCI will continue work throughout the next year to raise the profile of the teaching profession in Bahrain

The Ministry of Education has been working to finalise the teacher cadre, a document that defines the career progression and training entitlement for all of Bahrain's teachers and school leaders. The cadre shows that there are three tracks for educational staff: teaching, specialist work, and school leadership. Within each path the cadre specifies multiple 'grades' applying to all levels of teacher: from new teachers to senior teachers to consultant teachers to Principals (See Exhibit 8). For each grade there is a developmentally appropriate set of training sessions the teachers must undertake and there is also a corresponding pay grade. In the coming year, the Ministry will work with stakeholders to finalise this cadre and ensure that all teachers in Bahrain understand the cadre and the implications of it. Through this work the Ministry has developed a Professional Development Continuum Model (PDCM), a systematic approach to the professional training of teachers. The PDCM provides teachers with different pathways in professional development to allow them flexibility in how they upgrade their professional knowledge and practices. By being active learners who select the training modules that are important to them teachers can create their own end to end programme eventually leading to an advanced certification (for example Advanced Postgraduate Diploma in Special Needs Education or in Mathematics Education).

5. Learning for Work – The Secondary Vocational Education Programme:

This project will promote learning for work by improving the quality of education in Bahrain's commercial and technical schools. The Department of Education from Victoria, Australia, is a close partner to Bahrain in the development of this project, working closely with the team. Currently active in several pilot schools in Bahrain, the programme will increase the skill level of young Bahrainis in these schools by developing an education and training framework which will strengthen their effectiveness in the labour market. The programme in each school contains three elements:

- A core curriculum that develops academic skills and knowledge through the existing Bahraini curriculum, including Arabic studies, Arabic language, Religious studies, Mathematics, Science and Geography.
- A Personal Development Skills (PDS) curriculum delivered through projects and career exploration, which develops environmental awareness, commitment to personal goals, civil and civic responsibility and improved health and well-being.
- Vocational Specific Skills (VSS) delivered through projects and on-the-job training, which develop the 'employability' skills and specific skills and knowledge required to work in a particular industry or occupation. The Learning for Work project helps students make better career decisions when they leave secondary school, with a variety of options, be it employment or future study. Students are encouraged to take responsibility for their own learning, which is based on real-work themes, and gain practical skills that they will experience in the work environment of a real job.

Appendix 3

KHSF – Original Project Proposal 2001 – From UNESCO-IBE Bahrain Country Report 2004

1.1

Project title	His Majesty King Hamad's Schools of Future
Area of project	Information and Communication Technology (ICT) in teaching and learning
Responsible body	The Executive Committee for His Majesty King Hamad's Schools of Future Project
Responsible body's address	Ministry of Education, P. O. Box 43, Manama – Kingdom of Bahrain
Co-operating bodies	UNESCO, Ministry of Transportation and Bahrain Telecommunication Company (Batelco)
Staffing	Specialists at the Directorate of Curricula, Information and Documentation center, Educational Technology Center, Directorate of Training, Directorate of Finance and Budgeting, Directorate of Personnel, Directorate of Intermediate and Secondary Education
Starting date	2004/2005
Completion date	2009/2010
Target group	11,000 secondary school students from 11 schools at the first phase and 1,000 teaching and administrative staff. All the students, teaching and administrative staff and the parents will benefit from this project in the next phases.
Objectives	<ul style="list-style-type: none">- Making a qualitative turning point in the education system in the Kingdom of Bahrain- Responding to the direct needs of the national development and the labour market in dealing with modern ICT and ways to reach information.- Preparing the citizen to access the modern information society and to live with it.- Investing in the ICT's potentials to achieve the education quality, promoting its efficiency and achieving the curricula competencies at all educational levels.

Description

The project includes an integrated system comprises of an educational portal to achieve the qualitative turning point in the educational performance under contemporary educational environment, supported by modern educational and information technology. It allows the maximum of the educational interactive, releases the student creativities and provides them with wide movement to search, discuss and compete through the modern technologies that enable the student to observe all the local and international innovations. This requires to develop the curricula gradually and training teachers on using e-learning systems.

The project will be implemented in its first phase in all secondary schools. The first group will include (11) secondary schools in the first phase by connecting them with speedy electronically communication network via the central educational portal.

Plans for going to scale

The project will be executed in three phases, starting with (11) pilot secondary schools.

Publicizing

- Establishing a web site for the project on the internet.
- Disseminating information about the project in the schools
- Establishing a scientific-documentary library for the project.
- Communicating with all media regarding this project.

Evaluation

The project will be monitored and evaluated by the Measurement and Evaluation Center which will be established soon. The UNESCO will participate in the evaluation process of this project.

Keywords

ICT; electronic school; computer assisted instruction

Appendix 4)

Kings Hamad School for the Future Launch Document





KING HAMAD'S

SCHOOLS OF THE FUTURE PROJECT



مَشْرِعُ هَدْيَةٍ وَاللَّهُ يَهْدِي مَن يَشَاءُ وَيُنْفِقِ



مَشْرِعُ هَدْيَةٍ وَاللَّهُ يَهْدِي مَن يَشَاءُ وَيُنْفِقِ



His Majesty

King Hamad's

Letter of Praise



Date: 5 October 2003

H.E. Dr. Majid bin Ali Al Noaimi

Minister of Education
Kingdom of Bahrain

Dear Dr. Al Noaimi,

We have looked upon this new educational project, the Future Schools Project, which you presented, and which bears our name, with satisfaction. This project undoubtedly is within the realm of the new complete and compressive development movement which we desire for our country and for future generations. This movement represents a way to coincide with the educational

and scientific demands of technical development in modern educational curricula which is the requirement for a knowledge-based economy. Just as Bahrain entered the era of progress with the Hidaiya Al Khalifia School Project, the Future Schools Project also will be a symbol for its entry into the future with all of its developments, which is, needless to say, an important turning point in history.

We would like to express our appreciation and support for this ambitious project, and would also like to convey our gratitude to all school principals, and all academic staff affiliated with this project for their endeavors in responding to the demands of this project. This enthusiasm has assured us that we are on the right track, and that we will be able to comply with the demands of this project due to our educational development staff, their ability, and constructive and dedicated efforts.

Thus, we would like to applaud you and all Ministry staff on this positive course and would like to reiterate our endorsement and support of this project, and to all efforts for the elevation of education in our dear Kingdom.

Sincerely,

Hamad bin Isa Al Khalifa

King of the Kingdom of Bahrain

The Minister of Education's Speech

Electronic Schools and the Future



King Hamad's Schools of the Future Project was established under the guidance of His Majesty the King of the Kingdom of Bahrain. This project was initiated by HM so as to provide all with modern educational services that coincide with scientific and technological advancements.

This project is considered a substantial turning point in the field of education. It reassess the traditional learning system that we have been employing for many years, and turns it into an IT based system that prepares future generations to establish an advanced information society and build a knowledge-based economy.

Due to this transformation, many sources of information will be accessed. This will enable students to widen the scope of their knowledge and the process of individual learning, as well as the ability to benefit from the information revolution the world is experiencing. It will also enable teachers to interact with students, as well as oversee and assess them individually. Parents will be able to keep continual contact with their offspring's schools. In addition, traditional textbooks will be turned into e-books accessible with audio and video characteristics on selected items.

The information revolution, and technological advancements in the world, force us to act fast so as to coincide with these advancements for any who do not take action will be offbeat with the modern world and its achievements. In accordance with these global advancements, teaching methods, languages used, methodologies, and specialties needed will be reassessed.

This step forwards will enable future Bahraini generations to face the challenges of the Twenty-First century whilst armed with the new language of the era that includes the era's workings, respect for time and its investment, and the ability to deal with surrounding difficulties.

Technological renovation in society requires a change in the form of Arab society so that it may face its problems, and culturally grow so as to be able to face continual technological changes. This step can be achieved through exchange of scientific theories and the applications, and

employing them to serve society by making curricula the basis for employing technological tools.

Education plays an imperative role by allowing more flexibility to educational systems and reassuring individual scientific growth so as to elevate the scientific standard and preparing specialized learners that have the ability to comprehend and absorb developments.

Undoubtedly, King Hamad's Schools of the Future Project will facilitate the Kingdom of Bahrain in gaining prominence in the technological world by producing capable future generations and elevating the educational standard within the Kingdom. In addition, I would like to take this opportunity to convey my gratitude, and the gratitude of those affiliated with the Ministry of Education, to His Majesty, Sheikh Hamad bin Isa Al Khalifa the King of

the Kingdom of Bahrain for this esteemed project and for his continual support of the educational process in the Kingdom.

I would also like reassure that Minisrty affiliates have receive HM letter of praise and motivation to the Minister of Education, which will assuredly motivate them to exert all efforts to elevate education and the process human development. May we, with the guidance of Allah, all benefit from this project and be able comply with its requirements with honesty and dedication.

Dr. Majid bin Ali Al Noaimi

Minister of Education

A Word of Praise

H.Exc. Dr Majid Ali Al Noaimi

Minister of Education
Kingdom of Bahrain

Your Excellency,

Let me first express to you my sincere congratulation for the election of the Kingdom of Bahrain as a member of the UNESCO Executive Board. The extremely high score you have obtained demonstrates the esteem that the UNESCO member States have for your country.

I wish also to seize this opportunity to assure you of our support to the new initiatives of generalizing e-learning in schools, which will be known as King Hamad ' s Schools of the future.

We have carefully examined this proposal and we consider it a very important project that is full of innovations and forward-looking ideas. We believe that if it is implemented in the way it should, it will provide an excellent model that many countries would like to follow.

This initiative falls within the framework of the " New vision for Bahrain" that was launched by your ministry and approved by the council of Ministers. In order to assist you in implementing this important project, I have requested my colleagues Mr Miloudi to undertake a mission to Bahrain at the time of your convenience. Mr. Miloudi is a leading expert in e-learning and his contribution will be valuable in developing a national capacity to produce courseware for your schools.

The work on the other elements of the vision will be concluded in a few months. The task force that chair has advanced a long way in the preparation of a draft. Here again, I wish to assure you of our unwavering support in the finalization and implementation of this ambitious plan, the first part of which will be the completion of the King Hamad Schools project.

Please accept, Your Excellency, the assurances of my highest consideration.

M. El Tayeb

Director
Science Analysis & Policies Division
Science Sector

King Hamad's

Schools of the Future Project



A Vision for the Future

The Ministry of Education in the Kingdom of Bahrain is endeavoring to employ ICT Technology in the educational process. This move in the field of education will be established after a thorough study has been undertaken that aims to empower future generations with the basic skills necessary to transform the Kingdom into a knowledge-based economy.

Strategic Outlook of the Project

- * Continuing economical and social development.
- * Investment in knowledge - technical competition.
- * Developing a knowledge society.
- * Educational system based on employing educational information and communication technology.

The Goals of the Project

- * Developing the educational system in the Kingdom and elevating its products.
- * Accelerating the pace of human development.
- * Establishing an Information Society.
- * Building a Knowledge-Based Economy.
(Which will ultimately lead to Achieving Economic Development and Societal Elevation)

Towards an e-Learning Environment

Program Execution

- * Starting with 11 schools spread over the 5 governorates.
- * Providing schools with the necessary equipment, projection screens, and linking them via a network.
- * Cooperating with Batelco to develop a network so as to link the schools with the educational portal.

- * Establish a centralized educational portal to provide e-Learning services.
- * Transforming textbooks into interactive e-books.
- * Systematically developing textbooks and edifying e-learning contents.
- * Training teachers to use e-learning systems.

The Schools in the First Phase of the Project

Boys Schools:

- * Sheikh Khalifa Technological Institute
- * Al Hidaiya Al Khalifia Secondary School
- * Ahmed Al Omran Secondary School
- * East Rifa Secondary School
- * Hamad Town Intermediate Secondary School

Girls Schools:

- * Al Istiqlal Secondary Commercial School



- * Al Hoorra Secondary Commercial School
- * Sitra Secondary School
- * West Rifa Secondary School
- * Isa Town Secondary Commercial School

Benefiting from the First Phase of the Project

- * 11,000 students
- * 1,000 Administrative and Academic Staff

A Glimpse of the Project

- * It is a fundamental turning point from the traditional teaching-learning process to a future process based on technological employment.
- * It provides a learning environment for the students, teachers, administrative staff, and society which allows interaction at any given point.

- * It is an ideal solution to the demands of e-learning which covers a large number of users at once.
- * It is an educational model which contains teaching and learning tools, as well as tools of assessment.
- * It completely changes the limited resources of the traditional class environment to an open interactive motivated environment which improves the learning process, and helps benefit from various information resources:
 - * Allows every student to learn according to their ability, at the same time taking into consideration the different learning abilities of the students.
 - * Allows teachers to interact with students, and continually assess them individually.
 - * It helps students to benefit various positive skills and values illustrated by:
 - * Embodying cooperative learning

- * Developing assessment and building skills.
- * Developing artistic thinking
- * Reinforcing criticism and assessment skills
- * Reinforcing conversation skills
- * Developing students personality and enabling them to generate knowledge, and not just be a recipient of it. It also enables students to be active members of an information society based on economic knowledge.

Project Characteristics

The Project entails a complete educational organization that includes an educational portal that allows students, teachers, administrative staff, and parents to each access it according to their needs and restriction level.

1. The School Administration

Provides the school administration with a complete system that contains information about the following:

- * Staff
- * Teachers
- * Students
- * Parents
- * Educational Subjects
- * Schedules
- * Administrative Systems

2. The Teacher

Provides teachers with a program where any given subject, after its transformation into an e-book, can be taught at a click of a button, and where teachers can convey any piece of knowledge they see fit via this program.

It also enables teachers to give live lectures to all schools within the network, and will also enable teachers access to educational sites so that they can obtain the most benefit.

3. The Student

The educational organization allows students to:

- * Interact with other students and teachers.

- * Ask questions.
- * Give opinions.
- * Exchange opinions, information, and ponderings with others in their school, other schools, and schools all over the world.
- * Individual learning.

4. The Parent

The Parent interacts with the organization to access:

- * Offspring's academic performance.
- * Behavior.
- * Attendance.
- * Aids them to oversee their offspring and keep the School-Home tie active.

5. Curricula

This organization enables curricula specialists to prepare electronic education material, and keep in contact with students and instructors.

Conclusion

The project ties schools together, as well as with the Ministry, and also enables educators in recording selected courses and sending them to all schools. It also allows a larger number of students in the Kingdom to benefit from the transmitted studies.



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Appendix 5 – The Focusing questions for the targeted individuals and groups

These questions have been framed deliberately to be open-ended in order to encourage the participants to extemporise and reveal their opinions, rather than simply repeating the received wisdom of policy documents.

Senior Minister of Education

To what do you ascribe the success of the education system in Bahrain ?

What was the initial impetus for the commencement of the King Hamad School for the Future (KHSF) ?

What do you see the link between KHSF and school improvement ?

How do you counter conservative criticism that Western models of management and thinking are being imported into Bahrain without due concern for local traditions, beliefs, cultures and systems ?

Where do you see the place for creativity in the school curriculum ?

Expatriate senior managers and government advisers

Where do the government policies for education come from ?

How did McKinsey and Co come to be hired to assist in the reform of education in Bahrain ?

What is the role of the Arab Bureau for Education in the Gulf States (ABEGS) in curriculum planning ?

How do you see new technology, and school reforms aimed at integrating new technology eg. KHSF, impacting upon school improvement in Bahrain ?

School leaders

What do you see the role of education leadership in education reform and school improvement ?

How can school leadership influence curriculum reform ?

In what ways are school leaders able to lead and manage ICT implementation in school so that it has an impact on teaching and learning ?

Identify the ways in which you recognise the importance of strategic planning; what influence do you, as a school leader, have on strategic planning ?

Questions used as points of focus for the two mixed groups of teachers from all of the phases of education in Bahrain

As school leaders, what do you see the connection to be between the KHSF and the other school improvement initiatives that are taking place in Bahrain ?

How can school leadership influence curriculum reform ?

In what ways are school leaders able to lead and manage ICT implementation in school so that it has an impact upon teaching and learning ?

Comment upon the importance of strategic planning; what influence do you, as a school leader, have on the strategic planning in your school ?

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