

**THE IMPLICATIONS OF IMPLEMENTING ELECTRONIC HUMAN
RESOURCE MANAGEMENT IN ABU DHABI , DEPARTMENT**

Bakheet AlAmeri

**A thesis submitted in partial fulfilment of the requirements of Liverpool John
Moores University for the degree of Doctor of Philosophy.**

October 2017

Declaration

This is to declare that this thesis is my own work. I am solely responsible for the whole work. All the verbatim extracts have been highlighted and the sources have been specifically acknowledged in the thesis. To the best of my knowledge, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning except where due acknowledgement has been made in the text.

Signed: B. Al-Ameri

Acknowledgments

Alhamdulillah, Praise to Allah, who has granted me the strength, health and courage to complete this challenging and arduous PhD journey.

This thesis would not have been achieved without the guidance, encouragement, and support of many individuals. Firstly, I must express my appreciation to my supervisory team led by my former Director of Study Dr Bob McClelland and Dr Nunzia Di Cristo and Dr. Lilian Otaye. Secondly, I would like to thank my current Director of Study, Dr Chris Mulhearn who kindly stepped in to help me finalise my research.

I would like to express my appreciation for the efforts and support provided by the academic staff at Liverpool Business School. I would like to take the opportunity to thank my parents, wife, siblings, friends, cousins, colleagues at Abu Dhabi , and my dear children for their love and immense support during the course of this research. I would like also to acknowledge the huge support provided by Abu Dhabi , in funding this work.

Abstract

This study examined the pressing need to implement e-HRM within Abu Dhabi , Department (ADPD). It analysed the weaknesses and strengths of the current management and HR practices in running and managing its daily activities and operations. It evaluated the benefits and implications of implementing e-HRM. It also assessed the drivers, enablers and barriers to an effective adoption of e-HRM within Abu Dhabi , Department.

e-HRM (Electronic-Human Resource Management) emerged as a result of the advent of information technology. e-HRM takes advantage of the latest information technology to deliver an online real-time Human Resource Management solution. Although e-HRM is relatively new, it has been extensively researched. However, much of the literature on e-HRM tends to focus essentially on types of e-HRM, the role of e-HRM, factors influencing the value and effectiveness of e-HRM, as well as the drivers, benefits and challenges of implementing e-HRM. There is a consensus among authors that e-HRM supports the HR functions and contributes to cost effectiveness. It also provides dynamic impetus to HR operational capabilities. e-HRM has enhanced HR services and activities which in turn benefit both employees and management, through improved efficiency and cost reduction within the HR department. To some extent it has succeeded, but it has fallen short of taking HR to a higher level. In principle, it is assumed that e-HRM drives HR to become a strategic player in achieving organisational goals. It has disappointed on the strategic front.

In order to gather concrete evidence from multiple sources, mixed methods is employed to achieve the objectives of the study. The combination of quantitative and qualitative provides an in-depth investigation and allows closer assessment of the challenges and benefits of implementing e-HRM. Based on the purpose of the study, the nature of the problem and research questions, quantitative data are collected using a questionnaire involving employees at the AD , Department. This was supported by qualitative data using semi-structured interviews with HR management at ADPD.

Findings revealed that the adoption of e-HRM at ADPD is a collective effort and the key successful factors for implementing eHRM are readiness, planning and full management support. The results showed that e-HRM tools and facilities are not working to their full potential and the level of e-HRM implementation is considered below the required standard at the ADPD. Findings from interviewees showed that there is no clear e-HRM strategy and as a result, there is little engagement from employees. Findings also indicated that there are some challenges for effectively implementing e-HRM e.g. ineffective IT training and resistance to change. There is need to upgrade technology, reorganise work, and empower employees.

This study has provided a platform for further in-depth research into the challenges of implementing e-HRM in the UAE by expanding the literature which will benefit future research. The findings of the study aimed at empirically supporting the decision-makers at ADPD to put e-HRM development and implementation on the top of its agenda. The study

findings will therefore help the decision makers to implement e-HRM effectively and can serve as a model for translating vision into action.

Table of Contents

Declaration	ii
Acknowledgments	iii
Abstract	iv
List of Tables.....	xi
List of Figures.....	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Purpose of the study	1
1.2 An overview of the key literature	3
1.2.1 Transition from HRM to e-HRM.....	5
1.3 Statement of the problem	6
1.4 Research objectives	9
1.5 Research Questions.....	9
1.6 Significance of the study.....	10
1.7 Background of the study.....	12
1.7.1 UAE before the discovery of oil.....	12
1.7.2 Profile of the Abu Dhabi , Department	13
1.7.3 e-HRM in Abu Dhabi , Department.....	14
1.8 Structure of the research	16
1.9 Summary	18
CHAPTER TWO	21
RESEARCH CONTEXT	21
2.1 Introduction	21
2.2 Geographical background	21
2.3 Political structure.....	22
2.3.1The Federal system.....	24
2.4 The UAE population	27
2.4.1 The UAE demographic diversity and cultural background.....	28

2.5 Emiratisation policy: giving Emirati nationals preferential treatment	29
2.6 Background and structure of the Abu Dhabi , GHQ	32
2.6.1 Objectives and strategies of the Abu Dhabi , GHQ.....	34
2.6.2 ADPD values	36
2.7 Summary of the workings of the HR departments in ADP	36
2.7.1 HR Planning department	37
2.7.2 Selection and Recruitment department.....	38
2.7.3 Training department	39
2.7.4 Performance Appraisal department.....	39
2.7.5 , Schools Department	40
2.7.6 Personnel Affairs department.....	40
2.7.7 Scholarship department.....	41
2.8 Summary	42
CHAPTER THREE	44
LITERATURE REVIEW	44
3.1 Introduction	44
3.2 The emergence and evolution of e-HRM	46
3.3 The relevance of e-HRM: is it worth it?	49
3.4 Defining e-HRM.....	54
3.4.1 Distinguishing e-HRM, Virtual HR, Web-Based HR, HR Intranet, HRIS, and CHRIS	55
3.5 Key differences in approach between face-to-face HR and e-HRM.....	66
3.6 Types of e-HRM Drivers	68
3.7 Objectives of electronic Human Resource Management	69
3.8 Scope of e-HRM	72
3.9 Benefits and outcomes of e-HRM	74
3.10 Advantages of e-HRM systems.....	76
3.11 Disadvantages of e-HR.....	79
3.12 e-HRM activities.....	80
3.12.1 e-Recruitment	82
3.12.2 Advantages of e-recruitment	83
3.12.3 Disadvantages of e-recruitment.....	84
3.13 e-Selection.....	87

3.13.1 Advantages of e-selection.....	89
3.13.2 Flaws of e-selection	90
3.14 e-Learning.....	91
3.14.1 Advantages of e-learning	96
3.14.2 Disadvantages of e-learning.....	99
3.15 e-Compensation	101
3.15.1 Advantages of e-compensation	103
3.15.2 Disadvantages of e-compensation	104
3.16 e-Performance	105
3.17 Challenges and drivers (enablers) influencing the implementation of e-HRM.....	107
3.18 Why organisations need to adopt e-HRM.....	110
3.19 Technology Acceptance Models	121
3.19.1 Technology Acceptance Model (TAM).....	121
3.19.2 Advantages and disadvantages of TAM.....	123
3.19.3 Theory of Planned Behaviour.....	125
3.19.4 Limitations of the Theory of Planned Behaviour.....	127
3.20 Does e-HRM make a strategic contribution to HRM?	129
3.21 Why does e-HRM adoption fail to achieve better success rates?	134
3.22 Challenges of e-HRM in developing countries.....	138
3.23 e-HRM in the UAE.....	140
3.24 Summary and gaps in the literature.....	146
3.25 Conceptual framework.....	148
CHAPTER FOUR	151
RESEARCH METHODOLOGY AND METHODS	151
4.1 Introduction	151
4.2 Re-stating the research objectives and research questions	152
4.2.1 Research Objectives.....	152
4.2.2 Research Questions.....	153
4.3 The importance of research	154
4.4 The importance of understanding methodological assumptions in research	156
4.5 Distinguishing between methodology and methods.....	156
4.6 The relevance of research philosophies	158
4.7 Ontology and epistemology.....	161

4.8 Research Philosophies	167
4.8.1 Positivism.....	168
4.8.2 Positivism in the context of e-HRM.....	170
4.8.3 Criticisms of positivism	171
4.8.4 Interpretivism.....	172
4.8.5 Justification of the research philosophy for this study	176
4.9 Beyond Positivism and Interpretivism.....	179
4.9.1 Realism	179
4.9.2 Pragmatism	180
4.9.3 Constructionism	181
4.10 Research approaches.....	182
4.10.1 Inductive and deductive research approaches	184
4.11 Research Methods	187
4.11.1 Quantitative methods.....	189
4.11.2 Qualitative methods	190
4.11.3 Mixed Methods combining quantitative and qualitative	194
4.11.3.1 Defining mixed methods	195
4.11.4 The rationale for selecting mixed methods	199
4.12 Research Design	202
4.13 Types of Research	204
4.14 Data collection methods	205
4.15 Data collection instruments.....	208
4.15.1 Questionnaire.....	209
4.15.2 Questionnaire Design	212
4.15.3 Language and wording of the questionnaire.....	213
4.15.4 Translation of the questionnaire and interview questions.....	217
4.15.5 Interview	219
4.15.6 Defining Interview.....	219
4.15.7 Types of Interviews	219
4.15.8 Justification of data collection instruments selected by this study.....	221
4.16 The insider researcher.....	222
4.17 Sampling population and sample size	224
4.17.1 Sampling size and profile of interviewees	229

4.18 Pilot study	230
4.18.1 Pilot testing for this study	231
4.18.2 Data collection for the pilot study	232
4.18.3 Questionnaire formulation	232
4.18.4 Descriptive statistics for the piloted study	234
4.18.5 Respondents' feedback from the Pilot Test	235
4.19 Access/Reliability/Validity/Generalisability/Ethics	236
4.19.1 Access.....	236
4.19.2 Validity.....	236
4.19.3 Reliability	239
4.20 Data Analysis	240
4.21 Generalisability	241
4.22 Ethical Considerations	241
4.23 Chapter summary	242
CHAPTER FIVE.....	244
DATA ANALYSIS AND DISCUSSION	244
5.1 Introduction	244
5.2 Quantitative data analysis	245
5.2.1 Descriptive statistical analysis and Cronbach's Coefficient Alpha test	245
5.3 Quantitative summary	289
5.4 Qualitative Data analysis	290
5.4.1 Introduction.....	290
5.5 Interview procedures.....	291
5.6 Participants' profiles and selection criteria.....	292
5.7 Ethical considerations	293
5.8 Analysis of interviews.....	294
5.9 Discussion of interview findings.....	294
5.9.1 Theme one - 'e-HRM implementation drivers'	295
5.9.2 Theme two - 'e-HRM barriers and challenges'	297
5.9.3 Theme three – 'e-HRM strategic impact on performance and productivity'	299
5.9.4 Theme four – 'e-HRM implementation outcomes'	300
5.10 Reliability and validity in Qualitative research.....	301
5.11 Summary of qualitative data	302

5.12 Concluding remarks	303
CHAPTER SIX	305
CONCLUSIONS AND RECOMMENDATIONS	305
6.1 Introduction	305
6.2 Positioning this study within e-HRM key literature findings.....	306
6.3 Linking findings to the study objectives	309
6.4 Linking Qualitative and Quantitative findings	313
6.5 Recommendations.....	315
6.6 Contribution to knowledge.....	317
6.6.1 Implications of the findings of the study	317
6.7 Limitations of this study	319
6.8 Areas for future research.....	322
REFERENCES	323
APPENDIX	351

List of Tables

	Page
Table 2.1: Abu Dhabi , General HQ Strategic Plan	34
Table 3.1: Implications of e-HR	50
Table 3.2: Differences between e-HRM, Virtual HR, Web-Based HR, HR Intranet, HRIS, and CHRIS	55
Table 3.3: e-HRM Definitions	
Table 3.4: Key differences between HR and e-HRM	65
Table 3.5: Key objectives of e-HRM	69
Table 3.6: Advantages and disadvantages of e-learning	98
Table 4.1: Relationship between epistemology and ontology	159
Table 4.2: Differences between two main paradigms	161
Table 4.3: The characteristics of Positivism and Interpretivism	163
Table 4.4: Advantages and disadvantages of Positivism and Interpretivism	169
Table 4.5: Strengths and weaknesses of Positivism and Interpretivism	170
Table 4.6: Comparisons of four research philosophies	176
Table 4.7: Key differences between deductive and inductive approaches	179
Table 4.8: Strengths and weaknesses of quantitative methods	184
Table 4.9: Strengths and weaknesses of qualitative methods	186
Table 4.10: Key differences between qualitative and quantitative methods	187
Table 4.11: Mixed methods	190
Table 4.12: Quantitative, mixed methods and qualitative research methods	191
Table 4.13: Instruments of data collection	198
Table 4.14: Strengths and weaknesses of six sources of evidence	200
Table 4.15: Relevant types of data collection methods	202
Table 4.16: Advantages and disadvantages of questionnaire	204
Table 4.17: Strengths/weaknesses of interviews as data collection instrument	214
Table 4.18: Interviewees' profiles	223
Table 5.1: Reliability Test	238
Table 5.2: Gender of participants	239
Table 5.3: Transition from HRM to e-HRM	244

List of Figures

	Page
Figure 1.1: Structure of the study	19
Figure 2.1: Political and administrative map of the UAE	21
Figure 2.2: The Structure of the Federal Supreme Council	25
Figure 2.3: Population growth over the last decade	27
Figure 2.4: Organisational Structure of the Abu Dhabi ,	32
Figure 2.5: ADPD HR structure	41
Figure 3.1: Relationship between e-HRM tools, HRM applications and HRM effectiveness	66
Figure 3.2: Types of e-HRM	67
Figure 3.3: e-HRM areas based on organisational policies	72
Figure 3.4: e-HRM activities	79
Figure 3.5: e-Recruitment Process	85
Figure 3.6: Terminology used in the field of virtual learning	93
Figure 3.7: Digital HRM environment-in-action	109
Figure 3.8: Davis' (1986) Technology Acceptance Model	120
Figure 3.9: Jaen's (1991)'s Theory of Planned Behaviour	123
Figure 3.10: Federal eGovernment Strategy	138
Figure 3.11: eRecruitment Subsystem at Abu Dhabi ,	141
Figure 3 12: Conceptual Framework: Influencing e-HRM Implementation Factors	146
Figure 4.1: Linking reasoning with epistemological stance	181
Figure 4.2: Summary of the methods used in this study	201
Figure 4.3: Common sampling techniques and types	221
Figure 5.1: Distribution of Respondents according to age	240
Figure 5.2: Distribution of Respondents according to their level of education	241
Figure 5.3: Distribution of Respondents according to years of service	242
Figure 5.4: Respondent's department	242
Figure 5.5: Transition from HRM to e-HRM	244

List of Abbreviations

ADPD	Abu Dhabi , Department
UAE	United Arab Emirates
MNC	Multinational Corporation
HRM	Human Resource Management
IHRM	International Human Resource Management
IS	Information Systems
ICT	Information and Communication Technology
UTAUT	Unified Theory of Acceptance and Use of Technology
ERP	Enterprise Resource Planning
ESS	Employee Self-Service
MSS	Manager Self-Service
HRIS	Human Resource Information System

CHAPTER ONE

INTRODUCTION

1.1 Purpose of the study

In today's volatile economic world and faced with fierce global competition, organisations are compelled to keep pace with developments by being innovative and having adaptive insights in order to survive. As the UAE is one of the fastest growing developing countries with a leading role in initiating innovative and creative approaches to sustain economic growth, this study aims to determine whether the Abu Dhabi's , Department is ready to embrace change in a dynamic way by adopting electronic Human Resource Management (e-HRM). Electronic HRM is a relatively recent concept which is *“an umbrella term covering all possible integration mechanisms and contents between HRM and information technologies, aiming at creating value within and across organisations for targeted employees and management.”* (Bondarouk and Ruel, 2009: 507). The study examines the urgent need to adopt eHRM and demonstrate the relevance and potential benefits of implementing it within the , Department in Abu Dhabi. The adoption of e-HRM, fully or partially, will entirely rely on the skills and readiness of Abu Dhabi's , Department. (Almanhali et al, 2013). This study seeks to find out the level of readiness for implementing e-HRM and identify the drivers and obstacles to its adoption within the Abu Dhabi's , Department. It analyses the weaknesses and strengths of the current management and HR practices in dealing with its daily activities and operations.

This study will also focus on the importance of e-HRM and the use of technology in its implementation by analysing the positive or negative impact e-HRM will have on HR managers and employees. Electronic human resource management and the use of information technology (IT) to strengthen HRM processes is gaining popularity and is widely being applied in HR departments to enhance their efficiency and effectiveness by standardising and streamlining HR processes and by relieving HR personnel from administrative burdens (Stone et al. 2015, Bondarouk, Ruël, Parry, 2017, Schüßler, 2008, Lengnick-Hall and Moritz, 2003). This study investigates how the Abu Dhabi , (ADP) deals with and adjusts to the introduction of e-HRM as they need to be ready to implement new initiatives and new work practices. It assesses the perceptions and views of ADP employees about e-HRM readiness and how change is managed in order to develop a deeper understanding of the current practices and assessing the effect of e-HRM on the Abu Dhabi , Department (ADPD) as a whole. There is also a need to focus on providing a strategy for merging the HR functions with the e-HRM factors while at the same time investigating if the integration between the two is possible and to what extent. The study will also aim at identifying all possible challenges the integration process may present, such as:

- The adaptability of the organisation to change
- The implementation process
- Assuring the security of information during transition and also after the transition
- The IT expertise of the employees

The purpose of the study is to find out the implications of implementing e-HRM in the ADPD with the provision of subsequent recommendations that will guarantee a safe transition and the benefits for each , department in the UAE. To what extent are these departments implementing e-HRM effectively particularly in terms of work structure and planning, recruitment and selection, training, performance appraisal, and compensation and benefit issues which can be enhanced by utilising e-HRM.

1.2 An overview of the key literature

Extensive research has been conducted on the topic of e-HRM. The common theme that emerges from the review is that there is no single theory or approach that defines or explains e-HRM. But there is a consensus of opinion that e-HRM is one of the most implemented applications in organisations (Lee, 2011). Today's key debate is on the need for resource efficiency and reduction of cost. As a result, many developed countries believe that greater utilisation of technology by HR departments can improve their employees' productivity and business efficiency (Masum, 2015, Bondarouk and Brewster 2016, Kuipers, 2017, Sareen 2015, Bondarouk, Harms and Lepak 2015, Bhatt 2015 Bondarouk, Parry & Furtmueller, 2017, Eckhardt et al, 2014; Strohmeier & Kabst, 2014; Yousoff, Ramayah, and Othman; 2015). While there is little robust evidence (at a national scale) to support this assertion, most developed countries have improved a wide range of factors and initiatives to promote higher levels of technology uptake by HRM and the workforce (Yousoff, Ramayah, and Othman; 2015; Marler and Fisher, 2013). Many

emerging countries, such as the UAE, are now embarking on expensive infrastructure and policy initiatives to facilitate higher levels of technology adoption in electronic human resource management transformation, particularly in the public sector such as the Abu Dhabi , Department (Hussain et al, 2015). e-HRM has emerged as an enabling tool to improve cost effectiveness and enhance transparency. This research investigates government enablers that can assist HR activities at ADPD to enhance their adoption and use of e-HRM. A parallel stream of investigations is undertaken to reveal where the introduction of e-HRM can have the largest positive impact on these HR activities. Investigating these two complementary streams - where government factors enhance e-HRM transformation in the UAE and the areas of HR activities where technology has the greatest impact - will enable, for the first time, a consideration of the role and impact of government factors to promote HR use of technology. A framework has been developed to examine both streams of investigation. Consequently, this leads to the development of an evidence-based approach that highlights the areas where government factors for e-HRM adoption by the ADPD should have the greatest impact on performance and efficiency. These two streams of investigation largely focus on governments and businesses in developed countries. Since developing and emerging countries, like the UAE, have only recently developed factors in these areas, great care must be taken to ensure these 'developed world' factors and impacts are appropriate and might be replicated in the UAE and other emerging countries. Results from this first phase of the study therefore must be considered for their appropriateness in a UAE context. This 'local' contextualisation process will be cross checked for accuracy and relevance by sharing phase one

results and policy recommendations with a sample of leading HR officers at ADPD. The study will be undertaken with evidence based on recommendations for the development of e-HRM factors in the ADPD to enhance HR practices. Recommendations are expected to be approved by leading UAE consultants and experts of HR and policymakers at ADPD.

Thus e-HRM is a research area that has been studied from different perspectives and in many sectors and it is a topic which continues to evolve and attract attention from researchers and organisations. The literature is polarised between the success and failure rates of e-HRM.

1.2.1 Transition from HRM to e-HRM

To keep pace with rapid developments and to deal with the complex nature of the work place, there is need for Human Resources to move with the times and adopt e-HRM, which has become imperative to address the challenges in the information-based economy. Adopting e-HRM technologies that involve the use of the internet can enhance and improve , departments immensely (Foster, 2009). It is clear that some , departments in developed countries such as the Hong Kong , force and the UK , service, have adopted e-HRM technologies which has reduced costs and improved the efficiency of HR services (Caroll, 2007). Some of the improved services include recruiting trainees, training them and planning of manpower. (Ulrich and Dulebohn (2015, Bondarouk, Parry & Furtmueller, 2017, Stone et al. 2015, Bondarouk, Ruël, Parry, 2017) highlight the benefits of e-HRM and how to measure such transformation programs. However, it is essential to

establish roles, responsibilities and processes to enable a seamless transfer of service. If there is inadequate trust between the management and the suppliers, things can go wrong quickly and with serious consequences. (Ababneh and Chhinzer, 2014)

To date, it is widely acknowledged that there is little research on e-HRM and HRM in the United Arab Emirates (UAE), more specifically the Abu Dhabi , Department; more studies need to be carried out and this can assist in measuring the benefits of implementing a computer based system. Such studies can help the ADPD in determining whether HR employees' performance can be enhanced and placed into more strategic roles. This could improve the efficiency of the , department in general and contribute to better welfare for the employees. For that reason, and in order to tackle the existing research gap and support the implementation of e-HRM in ADPD, assembling knowledge on the main obstacles and drivers that will facilitate the transition is essential and therefore provide a basis and rationale for this research. Examining the possible impact of implementing e-HRM in ADPD will benefit from studies that have been carried out in different organisational and cultural settings. This research will focus on the studies that are well thought-out and considered imperative for understanding the process the , department in Abu Dhabi has to go through in order to implement e-HRM.

1.3 Statement of the problem

Many HR experts have identified the importance of e-HRM. Strohmeier (2007) states that e-HRM is a compilation of applications which help integrate information and mechanisms between HR and IT departments. Strohmeier (2007) suggested the aim of e-HRM is to create value for managers and employees within an organisation. Withers et al (2010) argue that e-HRM is a system that allows employees and the management greater accessibility to human resource related services and information through the organisation's web portal or intranet. According to Withers et al. (2010), companies since the mid-1990 have increased the use of technology in HR activities. Given the fact that e-HRM is a relatively new concept in the United Arab Emirates, very few organisations are ready for its adoption (Strohmeier, 2007). This observation is evident in the Abu Dhabi , because the HR department is using traditional methods; there is minimal documented data on the evolution of e-HRM in the United Arab Emirates (Strohmeier, 2007). This is in contrast to a country that spearheaded the implementation of both e-Government and smart government and also leads in information and communication technology. The e-Government Transformation Strategic Framework 2011-2015 aims to take strategic initiatives from the federal level in transforming all government services and making them available digitally via various channels. Recent advances have been witnessed with the government rolling out complete e-Governance and establishing an e-Connection between the Federal Financial Systems and the Abu Dhabi government. Hence the UAE Government has the infrastructure and the resources to introduce e-HRM systems across the entire public sector, including the , department. However, the challenge for Abu Dhabi , HR department and other UAE public sector units in HR is the

capability to convert the stored information into data which would be beneficial and important to managers, facilitating a transformation of HR into a strategic business partnership (Ababneh, and Chhinzer, 2014; Bondarouk and Ruel, 2009). Since 2001 large organisations have been reported as adopting e-HRM to allow them to assemble, store, process and influence large amounts of data inputs, reducing the cost of sustaining HR data while providing precise information about HR, anytime and anyplace. Data on the use of e-HRM in the United Arab Emirates , department is extremely sketchy; this is due to the negligible number of empirical studies conducted on this front (Parry, 2011).

In short, although the main benefits of e-HRM are an increase of quality and speed, the existing administrative processes in the form of a bureaucratic machinery appear to be rather slow and inefficient, conditional upon mainly paper-based processes. There is clearly growing pressure for the Federal Government to improve, deliver and achieve excellence in the quality of services in the public sector in line with the UAE 2030 vision. The traditional HR practices in the ADPD show resistance to the development of innovative and modern systems and there seems a lack of awareness of the benefits of adopting e-HRM at the ADPD. There is also inadequate staff training for e-HRM. These points highlight the urgent need for an effective HR management approach using e-HRM.

1.4 Research objectives

The main objectives of this research can be summarised as follows:

1. To analyse the current problems and challenges impeding the implementation of e-HRM at AD , Department.
2. To examine the benefits and success factors for implementing e-HRM in Abu Dhabi , Department.
3. To explore the views and perceptions of ADP management on the drivers, barriers and enablers to e-HRM.
4. To determine whether western e-HRM models can be implemented in UAE settings, in particular ADP.
5. To make recommendations based on the findings of this study on how to improve the provision and future development of e-HRM within ADP.

1.5 Research Questions

In order to achieve the objectives, this study addresses the following: the main question is: **What are the benefits of implementing e-HRM at the Abu Dhabi , Department?**

There are also specific research questions:

- 1) What are the current problems and challenges impeding the implementation of e-HRM in the AD , Department?

- 2) Can western e-HRM models be implemented in a UAE setting, in particular ADPD?
- 3) What are the perceptions and perspectives of managers and employees regarding the drivers of e-HRM implementation?

1.6 Significance of the study

Although, there has been extensive research conducted in the area of developing and implementing e-HRM in various sectors and in many countries, the topic still raises interest and is important and relevant to the UAE, in particular to ADPD in light of the recent UAE 2030 Vision to introduce excellence in government institutions in order to enhance the quality of public services. Thus, there is an urgent need for more in-depth research. The present study is therefore, worth undertaking, as it aims to determine how to implement e-HRM within ADPD successfully, creating more awareness of the importance of e-HRM development and the problems associated with it, which are of primary concern to any organisation in order to successfully address these problems. Furthermore, by identifying the key weaknesses in e-HRM, recommendations can be made about which approach or model will be suited to the ADPD. This research seeks to find out how implementing e-HRM will take the organisation to a higher level of efficiency. To this end, the case study will be conducted in several ADPD HR departments in Abu Dhabi. As an employee of the ADPD, this will enable the researcher to collect the relevant data. Choosing the ADPD departments for the

case study means the researcher can administer the data collection techniques effectively. The study seeks to fill the gap regarding the implementation of e-HRM in the UAE which would help in developing quality performance by the ADPD HR workforce. Furthermore, the new goals and challenges of the ADPD in the UAE in recent years have increased the need for more research in the area in order to investigate and evaluate the impact of implementing e-HRM on the organisation, build the quality of leadership, enhance organisational performance and quality of services, in order to face the new challenges and achieve the 2030 UAE Vision.

To conclude, wealth creation is no longer limited by a nation's control over natural resources, its physical infrastructure, or its geographical location, etc. (Noe et al, 2012). The only limit to wealth creation is the degree of success a nation has in applying its human capital and attracting financial capital (Withers, et al. 2010). This study will provide evidence based recommendations for the development of e-HRM, technology adoption, implementation and its impact on Abu Dhabi , Department. These recommendations will be “cross checked” by leading Emirati , officers and IT senior technicians at Abu Dhabi , Department. Therefore, it will enable, for the first time, a review of recommended government factors to enhance technology use in HRM at ADPD. A framework has been developed by the researcher to examine these factors and practices, mainly in e-recruitment, e-training, selection process development, Key Performance Indicators (KPIs) and performance development. Results from this research will be considered for their

appropriateness in a UAE context and could be applied at all , department in the UAE in the future.

1.7 Background of the study

The United Arab Emirates (UAE) is located in the Middle East, situated on the Arabian Peninsula between Oman and Saudi Arabia in the south west corner of the Arabian Gulf. It consists of seven states (e.g. *emirates* in Arabic) that include Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al-Quwain, Ras Al-Khaima and Fujairah (UAE Interact 2014). Whilst Abu Dhabi is the UAE's federal capital, Dubai is well established as the trading and commercial hub of the nation, building its reputation from humble origins as a small fishing and trading village in the 18th century.

1.7.1 UAE before the discovery of oil

The UAE's population consisted mostly of fishermen or pearl divers before the discovery of oil at the turn of the 20th century. Since the 1970s, the UAE has witnessed political, social, economic and industrial transformation, made possible through development and substantial investment. Today, it has achieved an income level similar to that of the industrialised nations. The creation of the United Arab Emirates in 1971 was the result of the consultations and negotiations that began in January 1968. The political entity of the United Arab Emirates was created as a federal state when the British colonial administration withdrew from

the Arabian Gulf. The federation, formerly known as the Trucial States, was formed on December 2nd 1971. The new state is made of the seven sovereign emirates. The UAE is an active member within the oil and energy organisations such as Oil Producing and Exporting Countries (OPEC), Organisation of Arab Producing and Exporting Countries (OAPEC), and International Renewable Energy Agency (IRENA).

In recent decades, the UAE has become the third largest exporter of crude oil and gas in the Gulf. With oil prices plummeting since 2015, the government has attempted to diversify the national economy. This has led to the growth of industry, construction, commerce, transportation, tourism, farming, fisheries, and communications.

1.7.2 Profile of the Abu Dhabi , Department

The Abu Dhabi , department was established in 1957, which marked the beginning of a new era in terms of law and order management, as till then the UAE had used traditional self-security methods and approaches. For the first time in the history of the country, a modernised , department had been formed, an initiative directly under the supervision of the then Ruler of Abu Dhabi, the late H.H Sheikh Bin Sultan Al Nahyan (H H) (AD ,, 2014).

The steps taken to improve and modernise the Abu Dhabi , department stem from advancements in terms of techniques and ways of policing worldwide over the last

two decades. In addition, there have been improvements in terms of the working environments of the , departments as well as the implementation of rewards and recognition systems, perks and so on, putting Abu Dhabi , Department on a par with other international policing organisations (Elbanna, 2013). The focus has been on the improvement and access to modern technology, on utilising practical experience, which has earned the Abu Dhabi , department a name in the middle-east for a policing department that ensures the safety of its citizens, and facilitates the country's various developmental efforts (Al-Ittihad newspaper, 2013). The Abu Dhabi , Department has won a number of awards and honours for its excellent services, including international awards and recognition. It adopted a new approach, forming a community partnership, in which the focus is on building relationships between the general public and the , department for smooth and effective maintenance of law and order (AD ,, 2014). The department has made tremendous efforts in building and creating institutional capability and an organisational culture that encourages and recognises excellence (Rees and Althakri, 2008). It has a performance monitoring system in place that not only measures the level of progress made by the department in terms of achieving its strategic objectives, but also helps in deciding what necessary steps should be taken in order to get rid of any unwanted situation. Moreover, the department also set up an external accountability mechanism to measure the effectiveness of the department and its compliance to various laws and regulations (Absal and Reporter, 2008).

1.7.3 e-HRM in Abu Dhabi , Department

Abu Dhabi , GHQ has a total of 36,000 employees inclusive of civil defence, border security, and both fire and ambulance services (Almanhali et al, 2013). Abu Dhabi , has seven human resource departments, namely: HR Planning Department, Education Department, , Schools Department, Training Department, Personnel affairs Department, Appraisal Department, Recruitment and Selection Department. ADPD HR has made an undertaking to initiate an electronic work environment for the , departments, especially for e-recruitment (www.ad.gov.ae). Few studies shed lights on the impact of e-HRM on , departments in general and ADPD in particular. According to Mellahi and Budhwar (2006), in the Middle East, HRM is not yet completely developed and in public sector units, the top management have insufficient professional skills. For e-HRM to be a strong point, Middle Eastern countries need to realise the strategic value of HRM functions. According to Almanhali et al, (2013), this department presents an essential e-service; the recruitment department uses the website to advertise jobs vacancies and collect in the applications which are assessed, evaluated and candidates selected. After that, the recruitment department puts together the interviews, medical tests, and other requirements. After all processes are concluded, the chosen candidates are moved to the Personnel Affairs department so that the necessary arrangements can be made. This reveals just a basic use of Information Technology (IT) in HR; it is not e-HRM. In a study conducted by Ali and Magalhaes (2008), where they conducted an assessment of HR and IT managers in leading companies in Kuwait, they uncovered that meeting some of the challenges lacked management support, encountered IT hitches, and lacked enough time. The results from the study

concluded that in the implementation of e-HRM, the main challenge was not necessarily being on familiar terms with the challenges of e-HRM but rather knowing what the right management processes are in order for a company to achieve business success as well as setting and achieving the goals of the different departments that exist in HR in line with the strategic plan of the organisation. In the above case, the review of the process basically meant looking into which operational processes called for reengineering to achieve the fit that exists between work on a daily basis and improved organisational success. Condrey (2010), while carrying out a case study on , departments, established areas where activities of the work can be smoothed by the use of new measures or improvements in technology. Indications show there have not been limited case studies and research conducted on the implementation of e-HRM in the United Arab Emirates (UAE) and in ADPD in particular. Almanhali, et al (2013) conducted an examination on the factors that led the ADPD to develop a custom-made e-HRM system. The other study conducted by Abdulla (2009), looked into job satisfaction in the , department of Dubai. These case studies did not look at the role of HR or implementation of e-HRM in the , departments in Abu Dhabi. Additional research was conducted by Al-Nuseirat and Biygautane (2014). However, these studies lack empirical evidence and practical implications.

1.8 Structure of the research

The study examines the challenges and importance of implementing e-HRM processes to support and enhance HR efficiency within ADPD. It consists of six

chapters:

Chapter One: provides an executive summary of the research; it presents the research background and clearly explains the problem justifying why it is important and contextualises the problem within an organisational setting. It also sets the research questions and objectives.

Chapter Two: provides the research context which consists of an overview of the UAE describing the history, political, economic and socio-cultural aspects which have a direct bearing on ADPD.

Chapter Three: critically reviews the literature related to e-HRM and the benefits of integrating e-HRM to enhance ADPD HR efficiency. It appraises the related debates and linkage between e-HRM authors. The literature informs the research objectives and lists gaps in previous studies, adding value to the current research. The literature review is, therefore, segmented into the following core areas: definitions of e-HRM; emergence and evolution of e-HRM research; e-HRM implementation success and failure rates. It identifies the gaps in related studies and provides a conceptual framework.

Chapter Four: discusses the methodology and methods that are applied in line with the aims and objectives of this study. It justifies the methodology paradigm that the researcher follows. This chapter presents also the population and subject groups, followed by the methods of data analysis. In addition, it illustrates the

instruments of data collection. They are namely: the pilot testing, questionnaire survey administration and the semi-structured interviews conducted concerning ADPD decision makers.

Chapter Five: presents the findings of the data collected from the questionnaire survey. It gives the background of the participants. This chapter also analyses the collected data from the ADPD HR employee survey. It provides the results of the qualitative data from the semi-structured interviews.

Chapter Six: interprets and justifies the research findings in line with the set objectives/research questions. It provides a discussion of the findings of both the questionnaire survey and semi-structured interviews. In addition, it draws conclusions and makes recommendations and addresses the limitations of the study. It presents suggestions for further research and highlights areas that benefit the decision-makers.

1.9 Summary

This chapter provides the background information for this study. It clearly explains the purpose of the study which focuses on the benefits of embedding e-HRM within ADPD and justifies why it is important and worth undertaking. It contextualises the problem or issue within the organisational setting, ADPD. It formulates the nature of the problem to be addressed by this study. It also sets the objectives supported

by precisely written research questions with observable outcomes. Finally, it outlines the structure of the study as follows:

Figure 1.1: Structure of the study



CHAPTER TWO

RESEARCH CONTEXT

2.1 Introduction

This chapter provides an overview of the UAE in terms of its geographic, economic, and political background and an overview of Abu Dhabi , Department (ADPD) in order to gain an understanding of the setting of this study.

2.2 Geographical background

The United Arab Emirates (UAE), located in the Arabian Gulf, is part of the Gulf Cooperation Council (GCC) along with Bahrain, Kuwait, Oman, Qatar, and Saudi Arabia.. The UAE has borders with the Arabian Gulf to the north, the Kingdom of Saudi Arabia to the south and west, while Oman is to the east. It has a coastline on the Gulf of Oman and the Arabian Gulf. The total surface area of UAE is about 83,600 square kilometres of which Abu Dhabi, the capital, occupies approximately 87% while Dubai, the second largest area, covers 5%.

A permanent constitution was adopted in 1996, establishing Abu Dhabi as the permanent capital, and granting each emirate much political and economic autonomy. Since 1971, the Supreme Council has ruled over the country. It is made

up of the rulers of each emirate, and led by a president elected by members of the Supreme Council.

Figure 2.1 - Political and administrative map of the UAE



Source: Political and Administrative Map of United Arab Emirates. Google images.

2.3 Political structure

The seven emirates of the UAE are each governed by a ruling family. The head of the Abu Dhabi ruling family holds the Presidency, and the head of the Dubai ruling family holds the position of Prime Minister. Each emirate has its own control over its social and economic policy, administration and oil and mineral wealth. Nevertheless, the United Arab Emirates has shown a high commitment towards the

expansion of the federal jurisdiction. For example, the rulers of the seven emirates agreed to unify the armed forces under a central command. In addition, local governments moved towards a federal government in the key areas of labour, national economy, foreign policy and property regulations. While most of the power rests in the hands of the individual emirs (leaders) of each emirate, in recent years, more power has been given to the federal government that oversees the whole of the United Emirates. The UAE is a modern and wealthy country. It is relatively moderate in the area of foreign policy, which has given it an important role in diplomacy in the region.

The United Arab Emirates can be said to have a blend of traditional patriarchal leadership and political loyalties. Article 49 of the Constitution of the United Arab Emirates defines the role of The Supreme Council which controls the affairs of the Union in general. The highest level of the UAE's federal government is called the Federal Supreme Council. It is made up of the rulers of each of the seven emirates, who choose and are headed by the country's president. Though it is not a written rule, traditionally the leader of Abu Dhabi is elected as President. The Supreme Council elects the Council of Ministers, which is responsible for managing all internal and foreign affairs, and is headed by the Prime Minister (traditionally the leader of Dubai). The Council of Ministers has 22 members, half of whom are chosen by the leaders of the emirates, and the other half by the Electoral College whose members are appointed by the emirates.

The UAE is wealthy because it has one of the smallest populations in the world and has one of the highest GDPs. Its wealth comes from oil revenue; the UAE's oil reserves are the seventh largest in the world and the country has a large quantity of natural gas reserves. Since its formation in 1971, the UAE has enjoyed political stability. The existing political structures appear to suit the tribal society of the UAE. In addition, the distribution of huge oil revenues in the form of social and economic infrastructure, high salaries and a high standard of social services, such as health and education, has raised the standard of living for UAE citizens and considerably reduced the likelihood of internal political and social unrest. It is worth mentioning that the UAE government has maintained a relatively good record on human rights since the formation of the state. This in turn has promoted political and social stability. The seven emirates merged into one political identity united under a national flag but with the freedom to run their internal affairs. The United Arab Emirates' Constitution defined the authority matrix for the Federal Government and Local Governments. (Official portal of UAE Government 2015)

2.3.1 The Federal system

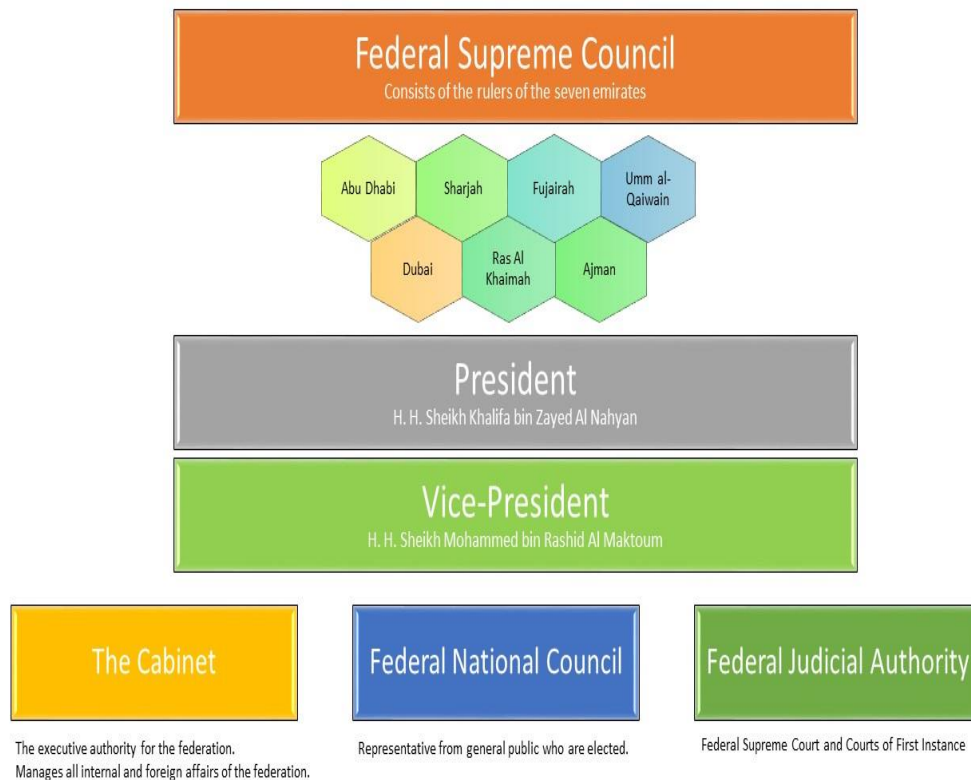
The United Arab Emirates was established when the seven individual states joined forces. The seven rulers agreed to work together in building a provisional constitution to prepare the country for the future and identified the required roles and responsibilities. The United Arab Emirates Constitution provided the Federal Government with the authority to manage foreign affairs, security and defence, education, public health, nationality, immigration, postal services, air traffic control,

licencing of aircraft, telephone, communications services, labour laws, banking, financial sectors, and so forth. (National Media Council 2013)

The United Arab Emirates Constitution was further revised and enhanced in 2004. The enhancement was led by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and the Ruler of Dubai, under the supervision and direction of Sheikh Khalifa bin Zayed Al Nahyan, the United Arab Emirates' President and Ruler of Abu Dhabi. It was further amended in 2007 by launching the United Arab Emirates Government Strategy that reflects six sectors including social, economic, public sector and rural areas developments and covering twenty-one key issues.

Furthermore, the United Arab Emirates' Supreme Council believes that decision-making should involve selected citizens who represent the rest of society in the Federal National Council, the United Arab Emirates' parliament. It was agreed among the Supreme Council in 2006 to introduce indirect elections of fifty percent of the seats in the parliament, and in 2011 the electorate was enlarged to include nearly one hundred and thirty thousand people.

Figure 2.2. The Structure of the Federal Supreme Council



Source: UAE Interact – 29 July 2015

The United Arab Emirates Federal Government includes:

- The Federal Supreme Council, which consists of the rulers of the seven emirates.
- The Cabinet, also known as the Council of Ministers.
- The Federal National Council (FNC), which consists of representatives of each emirate.
- The Federal Judicial Authority, which includes the Federal Supreme Court and Courts of First Instance.

(Official Portal of UAE Government 2015)

The UAE is heavily dependent on oil revenue, which has led it to become engaged

in a national development plan, while some individual emirates have also launched their own economic diversification programs. Like other Gulf States, these initiatives strive to create long-term roadmaps for economic progress that align policies, build human capital potential and cultivate the private sector. Common themes in these development plans include the Emiratisation of the workforce, which currently relies heavily on expatriate labour, and increased participation in the global economy.

2.4 The UAE population

The demography of the UAE is extremely diverse. The country's net migration rate stands at 21.71, the highest in the world. The population in the UAE averaged 0.09 million in 1960. The current population of the United Arab Emirates as of Thursday, July 28, 2016 is 9,274,706, based on the latest United Nations estimates. According to the Statistics Centre Abu Dhabi (SCAD 2015), the phenomenal pace of change in the UAE over the past few decades has led to a huge rise in the population:

The population is now 133 times what it was in 1960, having grown at an average annual rate of 9.5 percent, and the number of Emiratis doubled 46 times - with the non-Emiratis population increased 243-fold.

(UAE Interact - 29 July 2015)

A UN report suggests the United Arab Emirates accommodates roughly 7.8 million

migrant workers. The latest estimates suggest around 12% of the population are UAE nationals while the majority of the population are expatriates of more than 200 nationalities worldwide.

Figure 2.3 Population growth over the last decade



Source: World Bank - Population Estimates July 28, 2016

Abu Dhabi, the capital of the UAE, is the richest city among the other emirates with a population of around 2.65 million as of 2014 (Statistics Centre Abu Dhabi 2015). Dubai is the second largest city in the United Arab Emirates in terms of area and accounts for 40 per cent of the UAE economy with oil and gas representing 2 per cent of its economy. Dubai positioned itself as a regional hub for business, leisure and living. Dubai has a population of around 2.21 million as of 2013 (Dubai Statistics Centre 2015).

2.4.1 The UAE demographic diversity and cultural background

The United Arab Emirates has been and always will be a welcoming nation hosting

many cultures. Evidence showed that people were living in the United Arab Emirates from many centuries ago and were using it as a migration route to Asia. Currently, while UAE citizens account for about 12% percent of the total population of roughly 10 million, foreign workers, predominantly from South and Southeast Asia make up approximately 60 percent of the population. The remainder of the expatriate population includes a significant number of Arabs - Palestinians, Egyptians, Jordanians, Yemenis, and Omanis - as well as many Iranians, Pakistanis, Indians, Bangladeshis, Afghans, Filipinos, and West Europeans. Arabic is the official language. Other languages spoken include Persian, English, Hindi, Persian, and Urdu. English is widely understood in the UAE. Figures taken from the contracting company of a case study published by Fitch (2013) show the following breakdown of the foreign workforce within the UAE:

45% Indians

20% Pakistanis

15% Bangladeshis

20% Arab (originating from Egypt, Jordan, Syria and Lebanon)

All of the above come from varying backgrounds, some of whom are skilled, some semi-skilled and some already having professional work experience.

2.5 Emiratisation policy: giving Emirati nationals preferential treatment

Emirati people of all economic classes have voiced concern about the ever-increasing numbers of foreign companies and workforce, and as a result, the

Emirati government felt obliged to introduce an Emiratisation policy. This policy aims at creating job opportunities for UAE nationals, so that the national workforce could be supported, inspired and promoted (Al-Ali, 2008). The numbers of companies located in the UAE has increased rapidly and these companies have started to take part in activities that are linked to the development of their own citizens. The national population are always considered to be an exceptional asset for the development of the economy; however the lack of nationals within the overall workforce poses a great problem, which has led to the hiring of people from many nations for different industries. Arguments have re-emerged that many Emirati nationals remain unemployed even though the UAE has flourishing growth and economic development. Both the public and private sectors are subject to the implementation of the policy of Emiratisation. This policy was formed by the Council of Ministers of the UAE in the early 1990's to counterbalance the effects of a foreign workforce. This policy takes into account those barriers and hurdles that get in the way of Emirati individuals when hiring in the labour market begins. One of the many objectives of this Emiratisation policy is to provide citizens with optimum job opportunities (Toledo 2006).

One aspect that is observed is that this policy has been implemented to a greater degree in the public sector rather than the private sector, which has led to the devising of certain rules to make sure it is implemented the same way in the private sector as well. A study carried out in the banking and insurance firms of the private sector has shed light upon the fact that low levels of talent and skills including a weak grasp of spoken and written English among potential employees and a lack

of employer trust has led to difficulties for Emirati individuals when looking for a job. Al-Ali (2008) has also stated that Emirati nationals have the impression that there are fewer career opportunities offered in the public sector along with low wages in comparison to the private sector.

From the 1970s, because of substantial investments, the UAE has seen several extraordinary political and socio-economic changes in all economic and industrial activities made possible through the massive production and export of oil products (i.e., crude, refined, petrochemicals). With an annual GDP growth rate of 13.2% UAE has an open economy that identifies the country as one of the fastest growing economies in the world. This situation has led the International Monetary Fund (IMF) to state that:

It is critical that the UAE take additional steps to liberalise the economy and pursue further structural reforms, including lifting remaining barriers to foreign investment outside the duty free zones and enhancing the long-term employability of the national labour force through vocational education and technical training programmes (Rees et al., 2007).

On the other hand, the Official Yearbook of the UAE (Yearbook, 2013) states that:

The employment of UAE citizens is skewed towards the public sector, whereas out of the four million employed in the private sector, Emirati citizens account for only 20,000 jobs. In contrast, Emiratis accounted for more than 80 percent of government sector jobs in 2010 to reach the so-called "saturation point". The highest proportion of the UAE citizens

employed in the private sector is in the services, real estates, banking, and market sales segment, which absorbed 19.8 percent of the Emirati workforce.”

2.6 Background and structure of the Abu Dhabi , GHQ

Since the formation of the Abu Dhabi , (ADPD) in 1957, many changes have been put in place as well as a great deal of advancement, often through the initiatives and endeavours of the leaders and the dedicated , force. H.H Sheikh Khalifa Bin Zayed Al Nahyan, President of Abu Dhabi points out:

The security and tranquillity which our country is enjoying is a result of the efforts exerted by those men, who are standing up to their responsibilities and perform their tasks with sincerity day and night, towards all citizens and residents and we all appreciate the role they are playing of the urban change and the rapid development of the state.
(H.H Sheikh Khalifa Bin Zayed Al Nahyan)

Abu Dhabi , has had different designations over its history and been identified by the following six names:

- General Headquarters of Abu Dhabi , (2004–present)
- General Directorate of Abu Dhabi , (1984-2004)
- General Directorate of , (1977-1984)
- Local Ministry of Interior (Abu Dhabi ,) (1971-1977)
- Command of , and Public Security (1967-1971)

- Department of , and Public Security (1957-1966)

Its organisational structure is illustrated in the following figure:

Figure 2.4: Organisational Structure of the Abu Dhabi ,



Source: (www.ADP, 2014)

The Abu Dhabi , are regarded as the essential foundation of stability and security in

the country and working under the expertise of Lieutenant General H.H Sheikh Saif Bin Zayed Al Nahyan, it is the principal law enforcement agency in the emirate of Abu Dhabi. The responsibilities of the ADP are enforcing criminal law, the improvement in public safety and upholding of order and peace within the Emirate. Qualities that are upheld by the ADPD include honesty, integrity and respect for human rights whilst upholding public service to the Emirate. The ADPD, while working alongside the community, strives to remain efficient and effective in their practices. In order to do so, they use the most up-to-date technology and systems of management, and by mixing the old with the new, the ADPD has now become far and wide viewed as one of the world's leading law enforcement agencies (ADPD, 2014) in accomplishing the goals required for an adjustable, resilient and forward thinking modern law enforcement agency.

2.6.1 Objectives and strategies of the Abu Dhabi , GHQ

A new security strategy has been put in to place to fit in with the development and wide ranging changes that are taking place in the Emirates. This strategy was put in place by Lt. General H.H. Sheikh Saif Bin Zayed Al Nahyan so that changes and any challenges could be more easily dealt with. The General Head Quarters now has a clear vision in order that it may achieve its targets through simple pathways, endeavouring to cultivate its security systems in a more effective manner. This plan is outlined in the following table:

Table 2.1: Abu Dhabi , General Head Quarters Strategic Plan

Vision	<ul style="list-style-type: none"> • Endeavours to provide a high standard of policing services to sustain safety, and security for all citizens, expatriates and visitors.
Mission	<ul style="list-style-type: none"> • Striving to create a safe, stable and crime free society, and to make a positive contribution to the execution of justice in order to establish an environment of confidence between the public and the ,.
Value	<ul style="list-style-type: none"> • Honesty and integrity • Recognising achievements • Effective communication • Excellence

Source: (www. strategy.ad,, 2014)

The General Head Quarters has assumed a harmonised strategy of administration, whilst at the same time has put into place all obtainable resources in order to provide experience, a growth of knowledge and up-to-date technology for its employees. This has been achieved in a relatively short period of time by the General Head Quarters by enlarging its systems for security and outlining the specialist fields and duties required in order to succeed in reducing crime and protecting the public. By using an open and honest application of its strategy and

goals, the ADP has achieved and continues to preserve the well-being and safekeeping of the UAE people (AD,, 2014).

2.6.2 ADPD values

Shown below are the values upheld by Abu Dhabi , General Head Quarters that are being used to initiate and succeed in achieving its vision, using the faiths and traditions of Arab and Islamic principles:

- Integrity and honesty: maintain the highest levels of integrity and honesty at all times, and preserve human rights.
- Justice: provide fair and tactful services to all segments of society.
- Professionalism: committed at all times to perform our duties and provide our services in accordance with the highest relevant professional standards
- Effective communication: effective communication with the public and private sectors is of vital importance to accomplish our coveted goals.
- Excellence: make sure to pursue excellence in all our works and ensure that our activities are assessed effectively and efficiently, while also recognising achievements.

2.7 Summary of the workings of the HR departments in ADP

General Directorate for Human Resource (HR) of Abu Dhabi , (ADP) consists of seven departments:

- Human Resources Planning Department
- Selection & Recruitment Department
- Training Department
- Performance Appraisal Department
- , Schools Department
- Personnel Affairs Department
- Scholarship Department

The seven departments work together to form a traditional and comprehensive HR service to the men and women of ADP.

2.7.1 HR Planning department

Human resource planning is a process through which ADP anticipates future business and environmental forces. Human resources planning assesses the manpower requirement for a future period of time. It attempts to provide sufficient manpower required to perform organisational activities. The overall purpose of HR planning is to:

- Ensure adequate human resources to meet the strategic goals and operational plans of ADP - the right people with the right skills at the right time
- Keep up with social, economic, legislative and technological trends that impact on human resources in the , and in the sector

- Remain flexible so that ADP can manage change if the future is different than anticipated

2.7.2 Selection and Recruitment department

When ADP is hiring, they need to ensure that they hire the right employees. There are several different steps involved in the selection and recruitment process. The process includes application forms, testing, interviewing, reference checks and health exams.

Human resource managers review applications, test and interview candidates, perform reference checks and request health checks.

During the hiring process, a human resources manager will use some of the following steps to determine the best possible fit for the job:

1. Review job applications
2. Test candidates
3. Interview selected candidates
4. Choose candidates based on pre-determined selection criteria
5. Perform background and reference checks
6. Send selected candidates for a health check

The whole process is underpinned by fairness and adhering to best practice.

2.7.3 Training department

The Training department creates, promotes and fosters individual and organisational effectiveness by developing and offering an array of innovative and diverse programmes in support of the organisation's commitment to employee development, partnerships, and organisational enrichment. Training and development is one of the key HR functions. ADP looks at training and development as an integral part of the human resource development activity.

Training may be described as an endeavour aimed to improve or develop additional competency or skills in an employee on the job one currently holds in order to increase the performance or productivity. It involves change in attitude, skills or knowledge of a person with the resultant improvement in the behaviour. For training to be effective it has to be a planned activity conducted after a thorough need analysis and targeted at certain competencies; most important it is to be conducted in a learning atmosphere.

While designing the training programme, it has to be kept in mind that both the individual goals and organisational goals are very important.

2.7.4 Performance Appraisal department

One of the many benefits of performance appraisal is that it offers a rare chance for a supervisor and subordinate to have "time out" for a one-on-one discussion of issues that otherwise might not be addressed. Appraisal offers a valuable

opportunity to focus on work activities and goals, to identify and correct existing problems, and to encourage better future performance. Performance appraisal can have a profound effect on levels of employee motivation and satisfaction. Performance appraisal provides employees with recognition for their work efforts.

The data obtained from the appraisal system assists to inform and shape such matters as training requirements, career paths, promotion as well as any welfare or other personal matters. The department also deals with rewards and recognition of staff as well as career and talent management.

2.7.5 , Schools Department

The , Schools Department consists of primarily of a training school for new , recruits. All non-commissioned officers attend the , School at Al Ain to undergo basic training. The newly recruited non-commissioned , staff has to go through various background checks, examination, physical requirements, medical requirements, legal training, equipment training and firearm training at the school. Legal theory as well as practical , training occurs at the school before students pass out at graduation ready to serve the public. The , Schools Department ensures that officers meet basic local, Emirate, and federal standards. Graduation from the school is required before a new , officer is placed on active duty.

2.7.6 Personnel Affairs department

The Personnel Affairs Department, in general, performs the administrative roles of human resource management include policy implementation, records maintenance, welfare administration, legal compliance etc.

The Personnel Affairs Department manager helps management in the formation of policies governing hiring and retention, wage and salary administration, sickness and absence activities, personnel records, working conditions etc. He also helps in interpreting personnel policies in an appropriate manner.

The administrative role of the department is heavily oriented to processing and record keeping. Maintaining employee files, and HR related databases, processing employee benefit claims, answering queries regarding leave, transport and medical facilities, submitting required reports to regulatory agencies are examples of the administrative nature of HR management. These activities must be performed efficiently and effectively to meet changing requirements of employees, customers and the government.

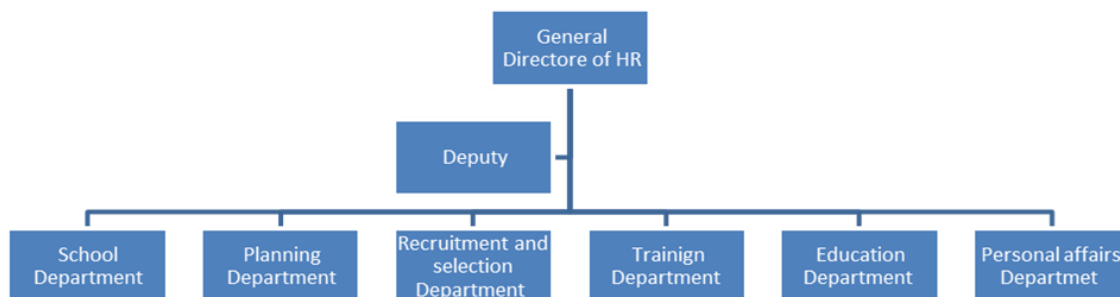
2.7.7 Scholarship department

ADP takes pride in sponsoring staff to take a course of further or higher education, either full- or part-time. Priority is given to students, especially if the qualification will help advance an individual as well as satisfying the organisation's needs. Help is given for staff to take study leave or make flexible working arrangements.

Sponsorship is for undergraduate courses and postgraduates. Sponsorship is taken on condition that a student will work for the organisation for a given period in return. The ADP programme strengthens the skills and potential leadership skills within the organisation. This programme also retains the most talented employees and showing them that ADP values their personal development, thereby helping to increase loyalty and motivation through education and scholarships.

Abu Dhabi , General Department of Human Resources with its organisational structure seeks to achieve lasting excellence and improve individual and organisational performance by attracting, developing human resources and leadership capable of making and contributing to the future of the state. The following figure shows the ADPD HR structure:

Figure 2.5: ADPD HR structure



ADPD, 2014

2.8 Summary

This chapter has highlighted the main features of both the UAE and the Abu Dhabi , General Head Quarters. The chapter initially provided an overview of the general

background of the UAE in terms of its history, economy, culture and the process of Emiratisation. The subsequent part of the chapter talked about the role of the Abu Dhabi , General Head Quarters discussing its accomplishments, strategy and vision. The ADPD has now begun to recognise the importance of human resources within the workplace and has expressed unease with regard to this. This unease has been acknowledged despite the ADPD proving its value and being determined to preserve security and stability in trying to ensure that all human competencies are set in place in order to achieve its vision. Contained within the strategy of the ADPD, the campaign to promote familiarity with the perception of implementing e-HRM within the , sector for more efficient employee wellbeing at all departmental levels, has developed into an area of greater interest and need for this study.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

The primary purpose of this chapter is to contribute to and broaden the debate on the importance and benefits of implementing e-HRM within a public sector organisation, namely Abu Dhabi , Department (ADPD), in line with the research objectives of this study. This study aims to examine the advantages of implementing e-HRM within ADPD. Much of the literature supports the view that e-HRM systems provide organisations with a variety of potential benefits. Moreover, there is a large body of evidence that indicates that e-HRM has a positive impact on organisational performance (Bondarouk, Parry & Furtmueller, 2017, Stone et al. 2015, Bondarouk, Ruël, Parry, 2017, Gonzalez et al. 2011, Ulrich and Dulebohn 2015). For instance, Stone and Dulebohn (2013) argue that e-HRM enhances HR efficiency, saves time, reduces costs, decreases administrative burdens, facilitates HR planning, and allow HR professionals to become strategic or business partners in organisations. This literature review aims to demonstrate the extent to which implementing e-HRM drives organisational performance and enhances human capital as the stock of competencies, knowledge, social and personality attributes. This chapter critically reviews the current e-HRM literature in order to synthesise, compare and contrast the different strategies and models in order to determine the merits and limitations of the theoretical base of e-HRM. The rationale for reviewing

and evaluating e-HRM is to contextualise and position the current research, identifying actual gaps and clarifying how e-HRM has already been investigated in various contexts and across many countries, benefitting from previous researchers' experiences and findings. The purpose of the present literature review is to provide a broad overview of current thinking in relation to theoretical e-HRM models, approaches, e-HRM enablers, drivers as well as the potential barriers and challenges for implementing and managing e-HRM in general in order to exploit this knowledge base about e-HRM and find out to what extent it can benefit Abu Dhabi , Department in the UAE. This provides an evidence base and a strong platform for supporting the development and implementation of e-HRM at ADPD.

The first section examines the emergence and evolution of e-HRM and the key enablers and drivers relevant to the organisation's performance. This is followed by a review of the different definitions of e-HRM. It highlights the benefits and challenges of implementing e-HRM and evaluating why e-HRM initiatives fail. It also identifies gaps and shortcomings in the e-HRM literature and establishes the foundation for developing the research questions and conceptual framework of this study. Finally, the chapter is summarised and gaps are identified.

HRM processes and HRM services are undoubtedly in better shape in today's global networking and information technology thanks to the huge potential benefits they offer, firstly by improving and often replacing the traditional HRM services and practices particularly within public organisations and secondly, by making a

valuable contribution to an organisation's HRM operations and quality services as a whole and in turn benefitting its different stakeholders (Kuipers 2017, Bondarouk et al.2015, Bondarouk and Ruel 2009; Marler 2009, Masum, 2015, Sareen (2015, Bondarouk, Harms and Lepak 2015, Bhatt 2015 Bondarouk, Parry & Furtmueller, 2017, Stone et al. 2015, Bondarouk, Ruël, Parry, 2017; Watson Wyatt, 2002; Wright et al, 2005, Bondarouk and Brewster 2016). Thus technology is considered as the driver of the organisation's strategy and growth. As Henson (2008) points out, today's workforce and technology are considered as a set of business tools of human resources.

3.2 The emergence and evolution of e-HRM

Electronic Human Resources Management (e-HRM) refers to the combination of information technology (IT) tools used in HRM processes and operations. However, electronic human resource management is a relatively new managerial concept within Human Resource Management (HRM), or as Ruël et al. (2007) put it, e-HRM is still in its '*youth-phase*'. Similar views are echoed elsewhere, that it is still early days for e-HRM theory, and research on electronic human resource management (e-HRM) is in its infancy (Masum, 2015, Bondarouk and Brewster 2016, Kuipers, 2017, Sareen (2015, Bondarouk, Harms and Lepak 2015, Bhatt 2015 Bondarouk, Parry & Furtmueller, 2017, Stone et al. 2015, Bondarouk, Ruël, Parry, 2017, Stone and Dulebohn, 2013). Despite the fact that it is one of the most implemented applications in organisations (Lee 2011), it is continuously gaining popularity and attracting attention from both the academic and business world.

The narrow scope of the literature on e-HRM is also an indication that it is still at an early stage (Marler and Fisher, 2013) and this view is confirmed by Strohmeier, (2007: 5) who argues that “*due to the recency of the field, studies are descriptive or explorative rather than focused on testing clearly stated hypothesis or cumulatively contributing to the state of knowledge.*” However, this research area generates interest and there is every reason to believe that the prominence and popularity of e-HRM is set to continue.

The actual label e-HRM emerged in the 1990's. The term was used to refer to the action of completion of the HRM communications via internet or intranet means (Lengnick-Hall, and Moritz, 2003). It is self-evident that the emergence of information technology and the internet as predominant resources of communication, has had a positive impact on service performance and has given organisations' HR new dimensions and taken them to new heights. It is also clear that electronic human resources management (e-HRM) and social media technologies have gained a growing popularity and invaded the landscape of companies and organisations and have become more deeply seated in HR culture. The HRM of companies and organisations has embraced these technological wonders to keep pace with the complex and diverse nature of the demand of knowledge based economies in a globalised world driven by fierce competition and economic and political instability. Therefore an organisation's ability to survive is closely linked to its ability to take advantage and make use of the new technological knowledge, by assimilating it and applying it to achieve its mission objectives (Nenwani and Raj, 2013). Thus today is dubbed the Information Age due

to the influence of computers and the internet which have benefitted HR departments. The use of computer technology has become essential and businesses simply can no longer function without it. This has resulted in a marked change in the way HR departments accomplish their role and perform their activities such as recruitment, job advertising, promotions and transfers, the conduct of appraisals, the planning of training and development, evaluating labour costs, etc. This view is reinforced by Bondarouk and Ruël (2009:506) who argue that *“e-HRM is an umbrella term involving all possible integration mechanisms and contents between HRM and Information Technologies aiming at creating value; within and across organisations for targeted employees and management.”*

The concept of electronic human resource management (e-HRM) has been extensively researched and debated by a number of academics (Ulrich and Dulebohn 2015; Strohmeier 2007; Withers et al 2010; Stone et al., 2015; Bondarouk, and Ruel, 2009; Ababneh and Chhinzer, 2014; Lengnick-Hall and Moritz 2003, Masum, 2015, Bondarouk and Brewster 2016, Kuipers, 2017, Sareen (2015, Bondarouk, Harms and Lepak 2015, Bhatt 2015 Bondarouk, Parry & Furtmueller, 2017, Stone et al. 2015, Bondarouk, Ruël, Parry, 2017 etc). The advent of e-HRM, has led to the fact that the once exclusive HR activities may now be undertaken not just by the specialized HR team of professionals, but also, more and more often, by line managers, IT facilities and by outsourcing (Stone & Dulebohn, 2013). As a result, e-HRM is at present a commonly adopted HR management practice (Strohmeier, 2009).

As can be seen, driven by the need to work more efficiently and spurred by potential benefits offered by information and communication technology, the development of e-HRM systems has emerged (Stanton and Coover, 2004; Fletcher, 2005). The role of HR has moved from a mundane administrative function to a strategic business partner. According to Gowan (2011:1)

Human resource management is evolving into a more technology-based profession. In many organisations, employees now see the face of HR as a portal rather than a person. This transformation of HR service delivery is known as “e-HR,” and implementing e-HR requires a fundamental change in the way HR professionals view their roles.

Thus e-HRM is a fairly recent research area made prominent, thanks in part, to technology advancements (Olivas-Lujan and Zapata-Cantu, 2007). Similarly, Paauwe, et al. (2005:3) support this view and state that “*the HRM function is subject to radical and dramatic change because of the implications of web-based organising.*”

3.3 The relevance of e-HRM: is it worth it?

The breadth and depth of the e-HRM literature suggests that academic interest is growing in this topic. Albeit many questions have been raised, concrete answers are hard to come by (Masum, 2015, Bondarouk and Brewster 2016, Kuipers, 2017, Sareen (2015, Bondarouk, Harms and Lepak 2015, Bhatt 2015 Bondarouk, Parry &

Furtmueller, 2017, Stone et al. 2015, Bondarouk, Ruël, Parry, 2017, Ruël et al., 2007)). The significance and benefits of e-HRM is one of the key themes that is discussed throughout the literature. E-HRM is generally viewed as a potential enhancing source of HR services within the HR department for both employees and management to improve efficiency and cost effectiveness within the HR department, and allow HR to become a strategic partner in achieving organisational goals. According to Stone et al (2009), HRM can use technologies to be more flexible, cost-effective, customer-oriented and more strategic. In the same vein, Stone and Dulebohn, (2013:2) believe that “*e-HRM systems are thought to provide a number of key benefits to organisations.*” Lengnick-Hall and Moritz (2003:369) make a case in support of implementing e-HRM by arguing that:

Use e-HR and your organisation can reduce process and administration costs. Fewer HR professional are needed because e-HR eliminates the ‘HR middleman.’ Furthermore, e-HRM speeds up transaction processing, reduces information errors, and improves the tracking and control of HR actions. Thus, e-HR improves service delivery.

Moreover, e-HRM systems are a means of assisting the implementation of HR strategies, policies, and practices. E-HRM technology helps consolidate and enhance the HR function to meet the HR needs of the organisation through web technology-based processes (Ruel et al 2004). Computers have taken over HR office work and tedious manual tasks have become a thing of the past as some organisations function with a paperless HRM system – saving time, money, and reducing staff, thereby doing more with less. This also means that the set of skills

needed by employees have changed. This transition from conventional HR to e-HR has considerably impacted on every area of human resource management. According to Aswathappa (2008: 691), e-HR can provide more accurate and timely data for decision making in recruitment, promotion, training and development, performance appraisal, compensation management, termination and administrative matters:

Table 3.1: Implications of e-HR

HRM Practices	Implications of e-HR
Job analysis and work design	Employees in geographically dispersed locations can work together in virtual teams using video, email, and internet
Recruiting	Post job opening online, candidate can apply for jobs online
Selection	Online simulations, including test, videos, and email, can measure candidates' abilities to deal with real life business challenges
Training	Online learning can bring training to employees anywhere anytime
Compensation and benefits	Employees can review salary and bonus details and seek information about and enroll in benefit plans

Source: Aswathappa (2008: 691) Human Resource Management, Text and Cases

The gist of the above debate suggests that the implementation of e-HRM is likely to generate a range of gains and provide perspectives that could potentially benefit organisations and lead to continuous improvement through streamlining their HR

departments and become more efficient in terms of both costs and production. The key question is whether e-HRM is truly innovative, a new phenomenon which is likely to bring about major positive changes (Strohmeier, 2007) or simply another trendy but transient concept within the field of human resources that could be viewed as a relabelling of HRM. Ruel et al (2004) published a paper entitled: *E-HRM: Innovation or irritation? An explorative empirical study in five large companies on web-based HRM*, which questions whether e-HRM is pertinent. This study argues that e-HRM is a continuous process and goes beyond a 'quick-fix' solution. It is a complex mix of various, interrelated processes of HR that is viewed differently by different organisations and, as such, is a difficult term to define. It also seems that all new concepts, processes, models and philosophies within HR can have their opponents and their advocates. E-HRM is different from traditional HRM; it is not just a repackaged brand of HRM with IT systems. It has an added value and provides fresh insights to HRM using new knowledge to enhance service delivery.

This study takes the view that e-HRM is not a magic formula for improving HR employee competences, but helps cost reduction and brings about a reduction of the administrative burden. HR departments need to acknowledge that the traditional style of managing human capital is no longer sustainable nor compatible with current challenges. An efficient approach to managing human resources is needed to enhance public service delivery. This study argues that e-HRM provides

a viable support to the current HRM practices because as Ruel, et al. (2004) stress, the key e-HRM goals are:

- Improving the strategic orientation of HRM
- Cost reduction/efficiency gains
- Client service improvement/facilitating management and employees

In short, e-HRM can be considered as the dynamics, systems, processes and approaches introduced in HR departments to get rid of the old methods of doing business and structures by trying to reconstruct them in order to enhance service delivery through e-HRM which is technology driven human resource services. In essence, e-HRM removes the piles of papers that are heaped on the Human Resources department desks. There is empirical evidence which indicates the beneficial influence e-HRM has, as it plays an important role in enhancing the efficiency of HR quality services which in turn drive the overall productivity of the organisation. As Johnson and Gueutal (2011:1) stress, HR is evolving into a technology-driven process with the following aims:

- To streamline HR processes and reduce administrative burdens
- Reduce HR administration and compliance costs
- Compete more effectively for global talent
- Improve service and access to data for employees and managers
- Provide real-time metrics to allow decision-makers to spot trends and manage the workforce more effectively
- Enable HR to transform so it can play a more strategic role in the business

Thus, it appears that e-HRM is not a fad; it is a trend on the increase (Strohmeier 2007). Broadly speaking, it could be argued that e-HRM is worthwhile, based on its positive contribution in enhancing the efficiency of HR activities, improving HR service delivery and transforming the role of the HR function into one that is more strategic (Hendrickson 2003; Ruel et al. 2004; Martin et al. 2008). In essence e-HRM aims to carry out all the HRM conventional operational activities using modern technological facilities, saving time and costs and enhancing service and access to data for employees and management. The driving force of e-HRM in the organisation is to find ways to improve service quality. Today, therefore the importance of e-HRM in gaining and sustaining a competitive edge has been widely accepted.

3.4 Defining e-HRM

Lengnick-Hall and Moritz (2003: 365) ask the question “*What is e-HR?*” and answer it with “*A real-time, information-based, self-service, interactive work environment*”. For the purpose of this study and informed by the literature, Electronic Human Resources Management (e-HRM) is a concept which consists of all activities and processes performed by HRM using information technologies to improve the quality of the services/processes, to increase efficiency and enhance transparency in order to create value for the organisation. E-HRM has become a well-established form of information technology system in organisations. The growing interest in e-HRM over the last two decades is demonstrated by the

extensive publications on this topic (Kuipers, 2017 Bondarouk, Parry & Furtmueller, 2017, Stone et al. 2015, Bondarouk, Ruël, Parry, 2017, Bondarouk, and Brewster, 2016, Marler, 2009; Strohmeier, 2007; Johnson and Gueutal 2011; Bondarouk and Ruël, 2009; Ruël et al., 2004; Paauwe, et al.2005; Sareen 2015; Stone et al 2009; Al-Dmour and Shannak, 2012, Grant, and Vogt, 2015). E-HRM literature tends to focus on the development, implementation, relevance and advantages of e-HRM, as organisations and institutions are undergoing radical change in order to survive the pressure of the global recession and government cuts. According to Marler and Fisher (2013:21) e-HRM is the *“configurations of computer hardware, software, and electronic networking resources that enable intended or actual HRM activities (e.g., policies, practices, and services) through individual and group-level interactions within and across organisational boundaries”*.

In general, research on e-HRM reveals that it has provided and continues to provide some useful insights and benefits for HR practices which have widely been accepted and whose processes have been adopted by many organisations with varying degrees of success. In some literature, e-HRM is bundled together and put in the same basket with other forms of information technology systems. These different systems are sometimes confused as one and the same and often used interchangeably. The indiscriminate use and the fuzzy boundaries in defining the above concepts, does not inspire confidence in the novice researcher who becomes mired in confusion.

3.4.1 Distinguishing e-HRM, Virtual HR, Web-Based HR, HR Intranet, HRIS, and CHRIS

Under pressure from global economic volatility, fierce competition for talent, skills shortages and several other factors, HR departments within organisations have sought innovative ways by which to manage effectively their human capital. e-HRM, Virtual HR, Web-Based HR, HR Intranet, HRIS, and CHRIS have been key ideas that have been crucial to HR progress over the last two decades, including, but not limited to, shared services, outsourcing, HR transformation, human capital management (Foster 2009). The following table highlights and clarifies the muddled jargon to avoid key terminological and definitional issues:

Table 3.2: Differences between e-HRM, Virtual HR, Web-Based HR, HR Intranet, HRIS, and CHRIS

e-HRM	Virtual HR	Web-based	HR Intranet	HRIS HR information system	CHRIS
Strohmeier (2007:20)	(Lepak and Snell, 1998).	(Walker, 2001)		Kavanagh et al. (1990):	Kettley and Reilly (2003)
E-HRM is the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities.	A network-based structure built on partnerships and typically mediated by information technologies to help the organisation acquire, develop, and deploy intellectual capital	Today's Human Resources function is being transformed by the Web. Web-Based Human Resources shows HR professionals how to use online technologies to offer more services to more employees at a lower cost	While the internet connects many people to many websites, an <i>intranet</i> is a website that connects people inside an organisation. An intranet is defined as a network based on TCP/IP protocols (an internet) belonging to an organisation, usually a corporation, accessible only by the organisation's members, employees, or others with authorisation. The	System used to acquire, store, manipulate, analyse, retrieve, and distribute information regarding an organisation's human resources. An HRIS is not simply computer hardware and associated HR-related software. Although an HRIS	A computerised Human Resource Information System (CHRIS) consists of "a <i>fully integrated, organisation-wide network of HR related data, information, services, databases, tools and transactions.</i> " Such a system can be described as

			intranet's purpose is to safely share part of an organisation's information or operations with its employees and to facilitate the sharing of this information. They support many real job functions and can become the primary avenue that employees use to communicate with people in other groups within the organisation and the way information is found to do job effectively/easily	includes hardware and software, it also includes people, forms, policies and procedures, and data.	e-HR, meaning the application of conventional, web and voice technologies to improve the HR administration transactions and process performance.
--	--	--	--	--	--

Source: compiled by researcher based on Arjomandy (2013) <https://danielarj.wordpress.com>

As can be seen, the two most dominant concepts are HRIS and e-HRM. The first refers to the automation of systems for the benefit of the HR function, while e-HRM is concerned with the application of web-based systems, such as employee self-service (ESS) and manager self-service (MSS), to change the nature of interactions among HR personnel, line managers and employees from one characterised by face-to-face relationships to one that is increasingly mediated by technology (Martin et al., 2008). According to Ruël et al. (2004), the difference between HRIS and e-HRM lies in the target group, which in e-HRM is not the HR staff but rather the employees and management. Stone et al. (2015) put forward similar views arguing that research on HRIS focuses more on the systems themselves, while research on e-HRM tends to take a more strategic focus Stone et al. (2015). In addition, Hendrickson (2003: 32) quoted in Strohmeier (2007)

stresses that *“though sometimes conceived as outmoded, human resource information systems constitute a “backbone” category of e-HRM.”*

Many other definitions have been put forward to explain and clarify the various shades of meaning and significance of e-HRM. In fact there are as many different definitions as there are authors who have attempted to define it. For Johnson and Gueutal (2011:1) the term e-HRM implies the renovation process that HR must undergo to enhance the service delivery: *“e-HR describes the transformation of HR service delivery using web-based technology. Now HR professionals must not only master traditional HR skills and knowledge, but also have the ability to apply that knowledge via technology.”*

In the same vein, Ruel, et al. (2007:281) describe e-HRM as *“a way of implementing HR strategies, policies and practices in organisations through a conscious and directed support of and/or with the full use of web-technology-based channels.”* Moreover, (Voermans and van Veldhoven, 2007:887) define e-HRM as *“the administrative support of the HR function in organisations by using internet technology.”*

The most widely cited and most referred to definition of e-HRM is that of Bondarouk and Ruel (2009: 507) that seems to unite both academics and HR professionals regarding the core meaning of e-HRM as *“an umbrella term covering all possible integration mechanisms and contents between HRM and technologies aiming at creating value within and across organisations for targeted employees*

and management.” The authors seem to suggest that e-HRM is a catchall term with multidimensional perspectives driven by technologies for the benefit of HR departments. Bondarouk and Ruel’s (2009: 507) metaphoric definition is wide-ranging as it covers four key components. It implies that e-HRM is an integrated and holistic system which involves a comprehensive set of HR activities to support the HR department to fulfil its role. Marler and Fisher (2013:21) point out that *“the two most cited definitions are provided by Strohmeier (2007) and Ruël et al. (2004).”*

e-HRM embraces the delivery of virtually all HR policies and activities thanks to IT:

- a. It refers to any type of HR practices and function that can be sustained with IT.
- b. It involves the process of application and ownership of e-HRM by HR organisational members.
- c. In addition, it includes the process of implementation.
- d. It also takes into consideration the needs of all stakeholders, since modern technology is no longer the monopoly of HR professionals, as was the case with previous HRIS systems.

Similarly, Paauwe, et al. (2005:3) argue that *“the HRM function is subject to radical and dramatic change because of the implications of web-based organising,”* while according to Voermans and van Veldhoven (2007) e-HRM is the administrative support of the HR function in organisations by the use of internet technology. Along the same lines, Strohmeier (2007:20) views e-HRM as *“the application of information technology for both networking and supporting at least two individual or*

collective actors in their shared performing of HR activities.” According to Johnson, et al 2015:2016) e-HRM is viewed as: “the application of computers and telecommunication devices to collect, store, retrieve, and disseminate [HR] data for business purposes.”

Kovach et al., (2006: 6) agree, defining e-HRM as the implementation of technology in performing Human Resource operations:

the adoption of technology in delivering Human Resource practices due to the digital revolution in the world is such a tool that organisations can employ to manipulate the performance and behaviour of the people on whom they rely on to achieve business success.

In tune with other researchers but using different wording, Ruel, et al. (2004: 365-366) suggest that *“e-HRM is a way of implementing HR strategies, policies, and practices in organisations through a conscious and directed support of and/or with the full use of web-technology-based channels.”* According to Shilpa and Gopal, (2011:66) e-HRM is also considered a *“web-based solution taking advantage of the latest web applications technologies to provide the users with a HRM solution online and in real time.”*

Today, HRM has been transformed significantly for the better (Parry, 2011). In many organisations in their moves towards a technology driven administration, the decision to integrate e-HRM is to respond to the complex nature world of work,

and, as Kidron et al., (2013: 3) underline, to meet the “*increasing demands and complexity of the fast changing environment.*” Martin and Reddington (2010: 2) put forward a more current description, taking into consideration the recent changes in mobile technology:

e-HR is concerned with the application of the internet, web-based systems, including newer Web 2.0 social media technologies, and mobile communications technologies to change the nature of interactions among HR staff, line managers and employees from a pure face-to-face relationship to a technology-mediated one.

In addition, Sanayei and Mierzaei (2008:79) define e-HRM as “*the use of computer systems, interactive electronic media, and telecommunication networks to carry out the function of the human resource management department.*”

There is a plethora of further definitions of e-HRM in the literature providing similar explanations. As can be clearly seen from the range of above sample of definitions, although researchers and practitioners may differ in the wording they use to define e-HRM, their explanations are consistent. Their definitions tend to share common features or even overlap in their use of key terms, making identical points in different ways. The following table illustrates, in addition to the above, one of the few most commonly used e-HRM definitions in literature:

Table 3.3: e-HRM Definitions

References	e-HRM Definition
Lepak and Snell (1998, p. 216)	“Virtual HR: a network based structure built on partnerships and typically mediated by information technologies to help the organisation acquire, develop, and deploy intellectual capital.”
Karakanian (2000, p. 35)	“Overall HR strategy which shifts from the HR department and is redistributed to other organisational units and trusted business partners, in a way which integrates HR activities with other corporate processes (e.g. Finance, supply chain, and customer service).”
Watson Wyatt (2002, p. 3)	“The application of any technology, enabling managers and employees, to have direct access to HR and other workplace services for communication, performance reporting, team management, knowledge management, learning and other administrative applications. eHR encompasses similar applications of technology but being more confined to those activities that typically fall within the HR function.”
Lengnick-Hall and Moritz (2003, p. 365)	“e-HR (or online applications for HRM) refers to the use of a wide range of Internet-based conducting HRM related transactions.”
Kettley and Reilly (2003, p.	“The application of conventional, web and voice technologies to improve HR administration, transactions

3)	and process performance.”
Ruel, Bondarouk, and Looise (2004, pp. 365-366)	“e-HRM is a way of implementing HR strategies, policies, and practices in organisations through a conscious and directed support of and / or with the full use of web-technology-based channels.”
Strohmeier (2007, p. 20)	“e-HRM is the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities”.
Voermans and van Veldhoven (2007, p. 887)	“e-HRM could be narrowly defined as administrative support of the HR functions in organisations by using internet technology.” The composite of databases, computer applications and hardware and software used to collect, store, manage, deliver, present and manipulate data for Human Resources.”
Bondarouk and Ruel (2009:507)	“An umbrella term covering all possible integration mechanism and contents between HRM and information technologies, aimed at creating value for targeted employees and managers.”

Source: Sareen (2015:4) Study of Employee Satisfaction towards e-HRM system (European Journal of Applied Business Management)

t 1.1)

Generally speaking the definitions have added to the literature but they often appear too broad and some lack precision. They have their merits as they contribute to the e-HRM debate but without adding much to what is already known. Each author seems to put their own touch and spin on the way the term e-HRM is defined to give it a new shade of meaning but ultimately the terms and the wording for describing and interpreting e-HRM have many similarities. Bondarouk and Ruël

(2009:507) admit that *“researchers have not standardised a definition of e-HRM yet”*. Thus the e-HRM literature shows that there is a degree of inconsistency in the way in which e-HRM is explained, and so it is difficult to find a practicable and universal definition. This view is supported by Strohmeier, (2007:20) who stresses that even though the *“e-HRM concept is widely used today ...there is hardly any explicit definition.”*

Some of the key recurrent themes that emerged from the e-HRM definitions are as follows:

- that e-HRM involves HRM activities including policies, activities, services, and collaborations with individuals and organisations, which are delivered and enabled using IT solutions such as software programmes, data bases and electronic networking capability. This shows that e-HRM is a multifaceted and an umbrella term covering all possible *“integration mechanisms and contents between HRM and information technologies aiming at creating value within and across organisations for targeted employees and management”* (Bondarouk and Ruel 2009: 507)
- The successful implementation of e-HRM involves the full commitment of all departments within the organisation. It is a process that requires participation of all and is the responsibility of every member of staff.
- The goal of implementing e-HRM is to create value for the organisation by enhancing HR operations and activities towards achieving the organisation's overall strategic objectives.

- The rationale for implementing e-HRM remains cost reductions, speedy access to an accurate current data base, and the ability to access data via multiple systems which will give organisations a strategic and competitive edge.
- The integration of technology to perform HR functions is called e-HR.
- e-HR can provide accurate and timely data for decision making in recruitment, promotion, training and development, performance appraisal, compensation management, termination, and administrative matters.
- e-HRM provides a spatial dimension in seeking to connect personnel units located either in the same workplace or that are geographically separated as is the case for international organisations. (Giovani Husen and Maes 2016)

For the purpose of this study, Electronic Human Resource Management (e-HRM) is the process of integrating information technology designed to support all the activities and operations a HR department performs to ensure efficiency and time-saving. It involves a shift in the delivery of transactional HRM from an approach that is paper work intensive to paperless and technology-intensive. In other words, e.HRM drives in the automation of routine HR tasks and practices by replacing the filing cabinets (Brown, 2002; Martinsons, 1994; Parry et al., 2007). The above stance is in line with Bondarouk, Harms and Lepak (2015:2) who sought a compromise definition arguing that:

In seeking a balance, we define e-HRM in this study as the integration of IT and the HRM field of scholarly inquiry. This focuses on all the HRM content that is shared through IT that aims to make HRM processes

distinctive and consistent, more efficient, high in quality and which create long-term opportunities within and across organisations for targeted users.

3.5 Key differences in approach between face-to-face HR and e-HRM

Since the emergence e-HRM over two decades ago, a growing number of HR departments within organisations have switched or upgraded their services and role from face-to-face human resource management activities to a more dynamic electronic human resource management. e-HRM facilitates the HR function to create rigorous operational capabilities and contributes greatly to HRM effectiveness.

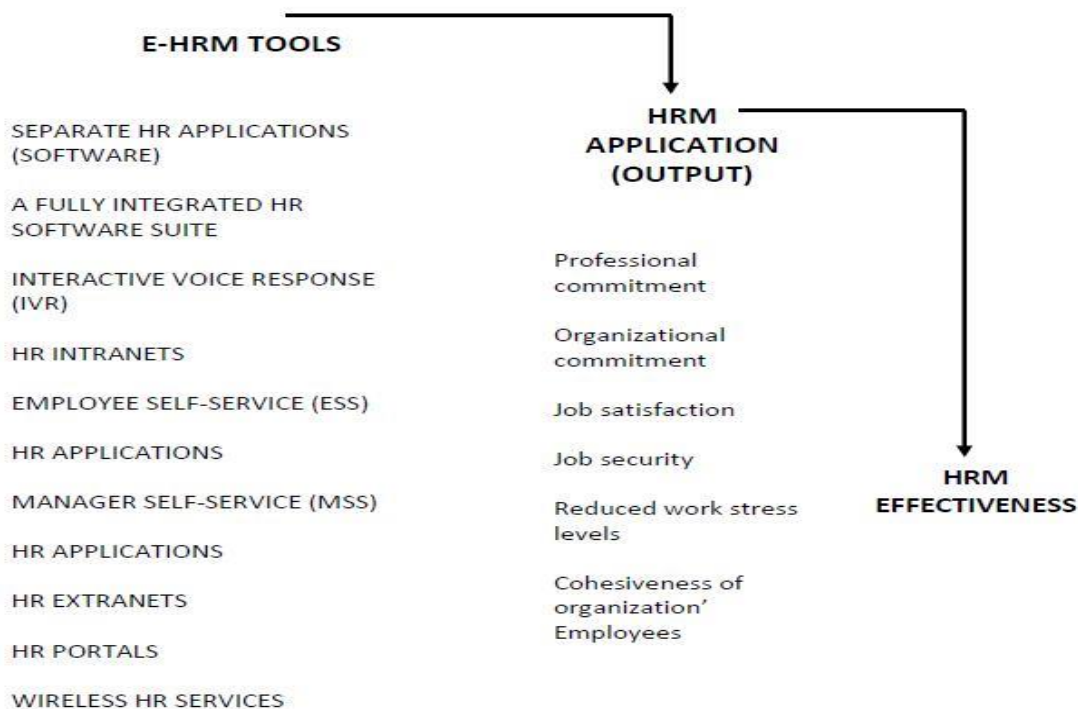
Table 3.4: Key differences between HR and e-HRM

Face to face HR (direct presence)	e-HRM (mediated presence)
Everybody is equal, everyone is given all the information	Everyone can access all information concerning him/her
The labour force at the company can be ordered into homogeneous groups: services can be tailored	The labour force consists of individuals: each service is shaped to the person
We listen to the requests, we analyse the situation with HR experts, and make concrete suggestions for the solution	We have documented every previous question and answer; we make them searchable, so that everybody can learn from them

Source: own editing based on Bondarouk and Ruel's (2009) "Comparison of implications of face to face and e-HRM"

The theme that emerges from the above contrast between HR and e-HRM clearly indicates that the improved HR service quality is the result of e-HRM implementation. A new wave of changes was triggered by the IT and Internet which opened new avenues and provided a variety of problem solving options which enhanced HR functions thus contributing to organisational success. Thanks to technological innovation HR is able spread its wings and have a holistic and effective role to achieve higher performance and focus more on value-added activities so as to fulfil its full potential. The following figure demonstrates the link e-HRM and HRM applications characteristics:

Figure 3.1. Relationship between e-HRM tools, HRM applications and HRM effectiveness



Source: Sanayei and Mirzaei (2008)

3.6 Types of e-HRM Drivers

HR processes have become increasingly digitalized with impact on the HR staff, HR professionals and the employees. Many authors recognise that IT has influenced HR in three important ways which led to three types of e-HRM (Lepak and Snell 1998, Ruel et al., 2004, Lengnick-Hall and Moritz 2003, Wright and Dyer 2000); operational e-HRM, relational e-HRM and transformational e-HRM. For instance, Ruël et al. (2004:368) identify three e-HRM types, the operational, relational and transformational type of e-HRM; illustrated in the following figure:

Figure 3.2: Types of e-HRM



Source: businessjargons.com/e-HRM 2016

- **Operational e-HRM:** deals with the operational and administrative functions such as personnel data administration, payroll, etc. *"The first, operational*

HRM, concerns the classic HR activities in the administrative area” such as “personnel data administration, payroll, etc.”. (Ruël et al., 2004:386)

- **Relational e-HRM:** involves supporting business processes through training, recruitment, selection, performance appraisal), etc. As Ruël et al., (2004:386) state: *“The second area, relational HRM, concerns more advanced HRM activities. The emphasis here is not on administering, but on HR tools that support basic business processes”*
- **Transformational e-HRM:** is concerned with the HR strategies and its activities such as knowledge management, strategic orientation and organisational change. Ruël et al., (2004:386) argue that *“Transformational HRM, the third area concerns HRM activities with a strategic character “* (Snell, et al 2002; Ruël, et al., 2004, Strohmeier and Kabst, 2014).

In summary, the aim of characterising e-HRM into overt types is to show the attributes and consequences of each e-HRM type. This allows the HR department within an organisation to make an informed choice about which type, operational, relational or transformational, HR activities need to focus on implementing based on their needs and the benefits it aims to gain from the specific outcomes related to that type of e-HRM.

3.7 Objectives of electronic Human Resource Management

e-HRM is the combination of HR and IT working together. Zafar (2012) points out that e-HRM drives ‘traditional’ HR professionals to rethink and redefine policies and practices. e-HRM steers HR professionals to focus on transforming information into

knowledge that can be used by the organisation for decision making. The majority of the studies on e-HRM have highlighted two key benefits of e-HRM for the HR function. Firstly, improving the efficiency and reduction of costs associated with HRM (Ruel et al., 2004, Lengnick-Hall and Moritz 2003, Buckley et al 2004). Secondly, facilitating a more strategic role for the HR function itself (Snell et al 2002; Gardner, Lepak and Bartel, 2003).

The broad objective of e-HRM as a process, is implementing HRM strategies, policies, and practices to enhance HR operations and performance of service delivery using IT. HR departments within organisations aim to achieve clear objectives by implementing a specific e-HRM strategy. Beer et al. (1984) highlighted four objectives of e-HRM as follows: high commitment, high competence, cost effectiveness and higher congruence. The following table highlights these:

Table 3.5: Key objectives of e-HRM

OBJECTIVES	DESCRIPTIONS
High commitment	By high commitment, workforce is motivated and understanding, and are willing to interact with the management about changes in the organisational environment and the impact that this can have on the internal organisation. For HR itself, this means that it should be able to play the role of change agent.
High competence	High competence points towards the capacities of employees to learn new tasks and roles if the circumstances require it.
Cost effectiveness	Cost effectiveness refers to the competitiveness of pay

	levels and employee turnover rate, and to the acceptability of costs resulting from employee resistance such as strikes.
Higher congruence	Finally, higher congruence refers to the internal organisation, the reward system, and the 'input, throughput, and output' of personnel, which need to be structured in the interests of all stakeholders.

Source: Beer et al. (1984)

Similarly, Ruel et al. (2004) identified four main areas as the key goals for implanting e-HRM in organisations, these are:

- 1) Cost reduction/ efficiency gains
- 2) Client service improvement
- 3) Improving strategic orientation
- 4) Allowing integration of HR functions

Lepak and Snell (1998) contribute to the above debate suggesting that HR in an organisation must be efficient, flexible, strategy focused and customer-responsive.

The above evidence clearly shows that e-HRM goals/objectives are often used interchangeably and have been defined and outlined extensively. There is a wide consensus about what e-HRM key objectives are. These are often overlapping in form and content. The objectives of e-HRM can be summed up as follows:

- It provides wide-ranging options and a swift access to a data base about people and jobs at affordable cost;
- It delivers support for future strategy and for policy formulations

- It facilitates monitoring of human resources demand and supply.
- It automates the employee data base, enabling faster response to employee related services, leading to faster HR related solutions.
- It provides better data storage, security and privacy.

Thus in short, the 'e' in e-HRM stands for 'enabling', 'empowering' and 'extending' HR functions (James, 2006), and is viewed as a facilitator, an enabler, an efficiency driver, a solution provider for improving the strategic role of HRM, reducing administrative HR work and enhancing effectiveness, standardisation, reduction of costs associated with HRM, improving HR service delivery, which in turn lead to boosting employees' satisfaction with HRM services and manager empowerment (Ruël et al., 2004; Parry and Tyson, 2011).

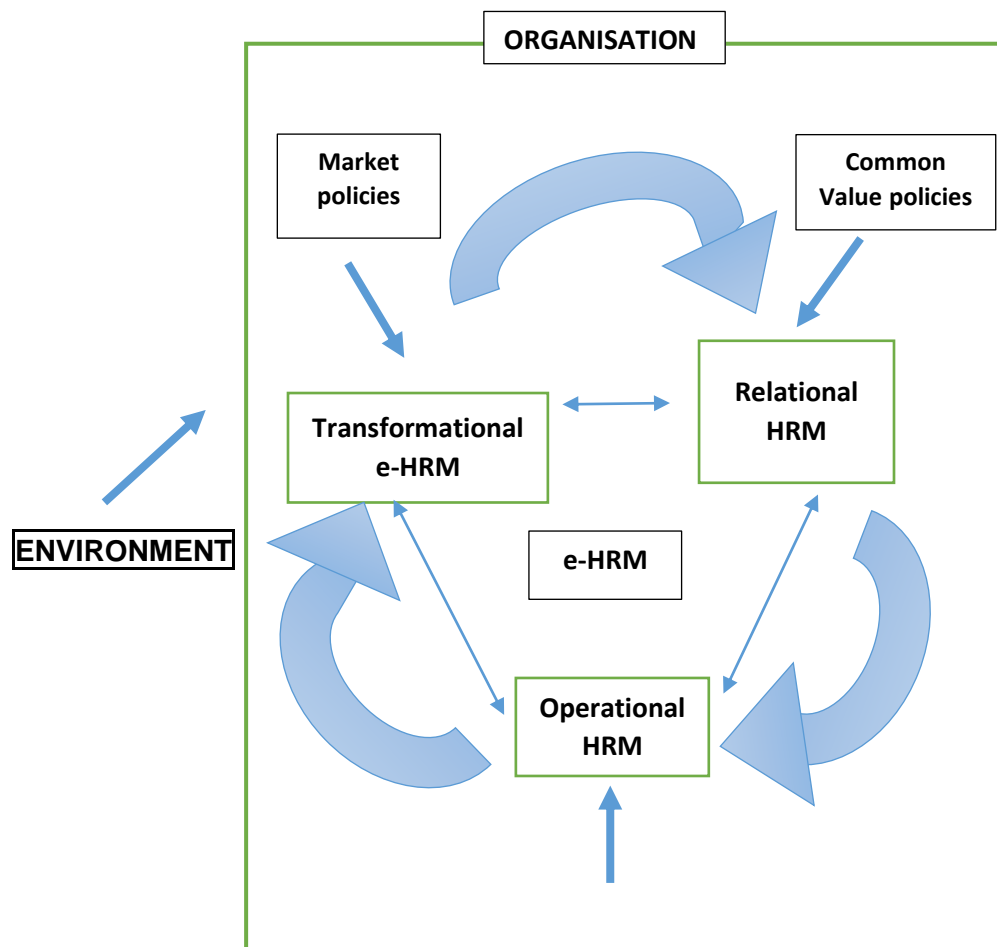
3.8 Scope of e-HRM

The main justification for adopting e-HRM relies on the positive attributes that e-HRM has of enhancing quality of service delivery, cost effectiveness, speeding up processes, supporting the strategic role of HR, etc. (Lengnick-Hall and Moritz 2003, Totolici, et al. 2013). The substance of e-HRM is the support it provides to the traditional HRM, in order to improve its operations and activities within the organisation (Parry, and Tyson 2011).

However, although e-HRM is an emerging, fast growing, and pertinent area of research, it is worth noting that there is scarcity of extensive research on the potential that e-HRM has to give a strategic competitive edge. In addition, the

current literature on the topic is rather descriptive, highlighting the benefits and advantages of e-HRM, but as Marler and Fisher (2013) point out, there is no empirical evidence proving a direct relationship between e-HRM adoption and reduced costs, organisational performance and strategy. Nonetheless, the e-HRM goals and its investments are associated with the primary HR role, either administrative, focused on cost savings, or strategic, aiming at gaining competitive advantage (Marler, 2009). This study argues that e-HRM is an opportunity for improving HR activities though not a panacea. It seems therefore that any plan to implement e-HRM comes with a caveat that no e-HRM strategic plan can deliver promising outcomes with certainty. The following figure shows e-HRM areas based on organisational policies.

Figure 3.3 e-HRM areas based on organisational policies



Bureaucratic policies

Source: adapted from Abdorasoul Hosseini and Nematollah (2013)

3.9 Benefits and outcomes of e-HRM

Despite its young age, e-HRM has come a long way and has evolved over time from concerning routine transactional HR activities to dealing with complex transformational ones. E-HRM aims to improve the HR operational processes through the use of technology, which allows data access to employees and managers. E-HRM is pertinent for implementing HR strategies, policies, and practices in organisations through a continuous and directed support by full use of web-technology-based facilities and networks. Srivastava (2010) argues that an e-HRM implementation support system can help the organisation to quickly mature its HR function, institutionalising best practices for long term growth. In the same vein, Lengnick-Hall and Moritz, (2003:369) state that:

Use e-HR and your organisation can reduce process and administration costs. Fewer HR professional are needed because e-HR eliminates the 'HR middleman'. Furthermore, e-HRM speeds up transaction processing, reduces information errors, and improves the tracking and control of HR actions. Thus, e-HR improves service delivery.

HRM was once reputed for its time consuming service delivery, projecting an image of paperwork and bureaucracy; now with the advent of e-HRM its best practices include the following advantages as suggested by Swaroop (2012:133)

- Standardisation
- Ease of recruitment, selection and assessment
- Ease of administering employee records
- Reductions to cost, time and labour
- Access to ESS (Employee-self-service) training enrolment and self-development
- Cost and ESS
- Location and timeliness

Additionally, Nenwani and Raj (2013:3) suggest comparable views regarding the benefits and outcomes of e-HRM:

- A decisive step towards a paperless office;
- Higher speed of retrieval and processing of data;
- More consistent and higher accuracy of information/report generated;
- Fast response to answer queries;
- A higher internal profile for HR leading to better work culture;
- More transparency in the system;
- Significant reduction of administrative burden;
- Adaptability to any client and facilitating management;

- Integral support for the management of human resources and all other basic and support processes within the company;
- A more dynamic workflow in the business process, productivity and employee satisfaction.

In the same line of thought, Stone and Dulebohn (2013:2) indicate that e-HRM has important advantages and that *“e-HRM systems are thought to provide a number of key benefits to organisations.”* The conclusion that can be drawn from the extensive and diverse range of benefits and outcomes highlighted by various authors, is that in general they consist of generic and comparable views. There are recurrent themes and similar explanations of e-HRM’s key advantages and benefits; however there is little empirical evidence to back this up, as Bondarouk, et al. (2010:1) argues: *“empirical evidence on the benefits of e-HRM is scarce.”*

In short, the majority of researchers on e-HRM appear to agree in their praise, that e-HRM is a blessing not a curse for HR departments because it provides mechanisms that enable the collecting, storing, restoring and updating of the existing data of the organisation’s human capital i.e., the knowledge, skills, and competences of the organisation’s employees.

3.10 Advantages of e-HRM systems

The aim of e-HRM as a tool is to deliver a better quality service and value creation using electronic processes throughout HR departments within an organisation for

the benefit of all the key stakeholders. E-HRM is a holistic approach that redefines the old HR activities and uses digital media and network technology offering more efficient and strategic way of working to optimise efficiency service delivery for the organisation success. An extensive list of e-HRM advantages which seems to include about everything, provides a clear view of the multidimensional advantages that e-HRM can offer. It helps to improve administration and efficiency (Swaroop 2012:135):

- It helps to improve client orientation and service.
- It helps to improve HR's strategic orientation.
- e-HRM is a cost reduction programme.
- e-HRM reduces administrative work.
- e-HRM reduces administrative staff.
- It helps HR dept. to get a clean profile of the employees.
- Employees are experiencing more HRM skills with the help of e-HRM.
- Employees get updated news of the organisation's dynamics.
- Employees take part in online discussion.
- Employees are self-initiators of their own career management direction.
- Employee and time managers self-manage employee management.
- HR managers will become more efficient in their working.
- Internet recruiting is a faster communication.
- e-HRM saves time or it is time efficient.
- Data management of all the employees in an organisation effectively.
- The employees concentrate on the work efficiently

- Strategic aspects of the job as e-HRM relieve them with their routine work.
- Adaptability to client increases after applying e-HRM.
- There is security of data in e-HRM.
- e-HRM supports multi-languages.
- e-HRM is a more dynamic workflow in the business process and productivity.
- the solution can be accessed and used in a web browser
- security of data, protected levels of access to individual modules, records documents and their component parts
- parametric and customisability
- access to archived records and documents
- user-friendly interface
- connectivity with the client's existing information system (payroll accounting, ERP, attendance registration, document systems... gradual implementation
- adaptability to any client
- collection of information as the basis for strategic decision-making
- integral support for the management of human resources and all other basic and support processes within the company
- prompt insight into reporting and analysis
- a more dynamic workflow in the business process, productivity and employee satisfaction
- a decisive step towards a paperless office
- lower business costs

(compiled by Swaroop 2012:135)

3.11 Disadvantages of e-HR

The security of HR data information is perhaps more critical than any other because it involves private and highly sensitive individual data. In the light of this, e-HR might be viewed as having a greater security risk. Disclosure and cross-border movement of HR data is a critical issue that must be managed very carefully, based on country and organisation specific, as well as individual authorisations.

Other disadvantages of e-HRM suggested by Suramardhini (2012:3) include:

- Employees and line managers' mind-sets need to be changed: they have to realise and accept the usefulness of web-based HR tools.
- They generally feel that they lack the time space needed to work quietly and thoughtfully with web-based HR tools and so, if there is no need, they will not do it.
- Guaranteeing the security and confidentiality of input data is an important issue for employees in order that they should feel 'safe' when using web-based HR tools.

On balance, it appears that the advantages of e-HRM far outweigh the disadvantages. According to Lee (2011) e-HRM is one of the most implemented applications in organisations. It is continuously gaining momentum and relevance. Moreover, the advantages e-HRM are supported by widespread use of e-HRM which is commonly acknowledged in the literature. Reduction of costs, efficiency,

continuous improvements in service delivery, effectiveness of operations, an increase in quality of HR activities, are recurring themes which have been highlighted by the majority of studies.

3.12 e-HRM activities

e-HRM has gained prominence within the setting of HR departments and has become a part of the language of HR for both professionals and academics. The staggering progress in the exploitation of IT and the Internet over the last decade have accelerated the pace of implementing and applying Electronic Human Resource Management (e-HRM). Marler and Fisher (2013: 18) point out that *“one purpose of e-HRM is to make the HRM function more strategic.”* The literature suggests that e-HRM is an overarching term that extends over a wide set of activities, but the most widely used e-HRM functions are as illustrated in the following figure:

Figure 3.4: e-HRM activities



Source: businessjargons.com/e-HRM 2016

The advantages of e-HRM are much commended and highlighted in the literature. According to Imperatori and DeMarco (2009), e-HRM applications have empowered organisations and businesses to be more versatile and to promote knowledge-sharing. At the same time, e-HRM provided solutions which allowed employees to manage their working preferences. The motivation behind implementing e-HRM is to improve efficiency and quality service delivery, standardisation and organisational brand, and to empower managers and transform HR activities into more strategic functions.

It is widely agreed that e-HRM performs a wide range of functions from the simple storage and communication of data to more complex transactions. One of the primary aims of implementing e-HRM is to alleviate the administrative and transactional burden on the HR function by re-structuring HR to enable it to play a more strategic role in the organisation. As technology is developing rapidly, the

range of functions that e-HRM can perform is also expanding. Today, e-HRM involves multi-functions and multi-tasks which can be put to several uses, including:

- 1) e-recruitment
- 2) e-selection
- 3) e-training and development
- 4) e-performance management
- 5) e-compensation and benefits
- 6) e-reward and recognition
- 7) e-employee relations and employee engagement

The list is not exhaustive as HR is constantly evolving and its functions and scope of activities are growing; however the above are the key functions of e-HRM. e-HRM refers to technology's role in energising HR activity. Instead of a centralised personnel team undertaking routine tasks such as approving pay rises, sorting out training and checking leave entitlements, these can be handled by the employees themselves or their line manager. Armstrong (2006: 67) argues that "*e-HR provides the information required to manage HR processes.*" This may simply involve a basic employee database and payroll system but can be extended to include such systems as e-recruitment, e-learning, e-performance management and reward etc.

3.12.1 e-Recruitment

The business world is suffering from a shortage of skilled manpower and firms are struggling to attract and retain human capital (McKinsey and Company, 2001). This

makes the organisation's efforts to attract, select, develop, and retain skilled employees in key strategic positions a matter of survival. To compete effectively in a complex and dynamic environment and achieve sustainable progress, an organisation's ability to attract high-quality human capital is considered a true competitive advantage (Bartram, 2000). In the same vein, Rothwell (2010, 2011), states that it is important to have and develop skilled manpower in order to sustain the organisation's strategic position to accomplish strategic business targets.

To keep pace with the technological development, most organisations are using the internet as a recruiting approach by advertising jobs and prospective applicants apply online directly to employers, and many have developed sophisticated web-based recruiting systems (Stone et al. 2006). Electronic or e-recruitment has gained popularity and is likely to form the basis on which business will be conducted in the future. e-recruitment is also known as 'online recruitment or internet recruitment' (Gupta 2016). It is paperless, faster, simpler and a more effective process. According to Vidot (2000), e-recruitment is the use of the internet to attract high quality candidates and screen suitable profiles, streamlining the application and selection process. To conclude, e-HR-based recruiting systems are believed to have much wider scope and a much wider set of prospects than traditional recruiting systems (Gueutal and Stone, 2005; Stone, et al., 2006).

3.12.2 Advantages of e-recruitment

- cost-effective, reduces cost

- accessibility, vacancies are immediately accessible, anyone from anywhere can apply
- facilitates the decentralisation of the hiring role, once the line managers get the authorisation to hire
- speedy and convenient system
- more comprehensive and strategic recruitment framework
- wide reach
- reduced time scale, and less burden on administrative work
- recruitment across locations are aligned with organisational benchmarks
- the right talent and position requirements, and their goals and performance are standardised
- provides an integrated and online solution for the recruitment process
- allows multiple users to access the information simultaneously
- reduces the need to store paperwork

3.12.3 Disadvantages of e-recruitment

- misuse of confidential data by companies
- potential candidate may be unwilling to apply due to privacy issues
- candidate does not have internet access
- the rapid growth of internet recruiting also means the HR professionals can be overwhelmed by the breadth and scope of internet recruiting demand
- measuring effectiveness remains a grey area
- impersonal - lacks the human touch of face to face contact

- post maintenance - maintaining and updating the original job involve labour costs
- Large response rate can be time consuming, to sift through to determine genuine candidate from time wasters

Du Plessis (2007) as well as Härtel et al (2007) support the view that technology is an invaluable tool for most HRM processes to execute its tasks in an organisation. Organisations are more and more reliant on computer technology, particularly in recruiting through the internet, otherwise known as e-recruitment (Mottl, 1998). As Stone et al. (2006: 232) point out:

Organisations are increasingly using the internet to advertise job openings and attract qualified prospects. The web-based advertisements often provide prospects with information about (a) job vacancies, (b) job descriptions, (c) the organisation's culture and its "brand identity," and (d) the inducements (e.g., pay, fringe benefits, learning opportunities, promotion prospects) offered to its employees.

Evidence shows that e-recruitment has its merits and provides wider and useful options for the recruiting employer (Lukaszewski, and Isenhour, 2005). However, other studies have questioned the effectiveness of e-recruitment arguing that in contrast to the conventional recruiting systems, e-recruiting systems are more likely to produce candidates who have inauspicious backgrounds and are frequent job hoppers (McManus and Ferguson, 2003). Thus the findings of research on the

effectiveness of e-recruiting are not undisputed, Future research is needed to examine the factors that moderate the relation between its use and various criteria (Stone et al. 2006: 232). This study takes the view that e-recruitment is a multifaceted concept and its effectiveness depends on several factors including change in organisational culture, management support and commitment, and changing the traditional way of doing business. Always doing the same is no longer sustainable. The relevant literature also underlines that e-recruitment needs to be used in combination with other techniques to achieve a good success rate. Caggiano (1999) and Borck (2000) point out that internet-based recruiting will not replace conventional practices in recruiting but a well-implemented e-recruitment strategy can. Kamal and Kumar (2013), echo a similar view, claiming that computers have simplified the task of analysing vast amounts of data, and they can be invaluable aids in human resource management, from payroll processing to record retention. In short, e-recruitment is a well-recognised tool that has given HR a new dimension and added value, but the use of multiple recruitment methods, including conventional ones would make sense. The following figure illustrates the e-recruitment process:

Figure 3.5: e-Recruitment process



Source: Ruël et al (2004)

3.13 e-Selection

Employee selection and employee recruitment share some common similarities and are often used interchangeably as there are no clear-cut boundaries. The term selection refers to the process of attracting and choosing prospective candidates for employment. Bodea et al. (2003:2), suggest that *“Usually, it is difficult to decide where recruiting ends and selection begins. The main purpose of the selection process is to distinguish individuals on the basis of important characteristics.”* Bodea et al. (2003) also stress that deciding on the decoupling point between e-recruitment and e-selection processes is usually difficult but generally e-selection would start when the analysis of data or candidates starts somehow to feed the decision-making process. e-selection has gained ground and is becoming a popular means of recruiting employees online, using a variety of techniques, contacting the candidates through e-mail and conducting the preliminary interviews

and final interview through Skype or audio conferencing and video conferencing to find the candidate with the talent and characteristics that are needed and which are consistent with the organisational culture (Stone et al., 2006). In addition, the reference letters and reports from the referees are transmitted through e-mail. According to Avison and Elliot (2006: 3): *“The study of information systems and their development is a multidisciplinary subject and addresses the range of strategic, managerial and operational activities involved in the gathering, processing, storing, distributing and use of information, and its associated technologies, in society and organisations.”*

Under pressure to continuously enhance their selection criteria, many organisations have adopted online recruitment assessment tools such as psychometric tests for use during the recruitment process to assess prospective employees' fitness for a position (Gueutal and Stone, 2005) alongside traditional approaches. Firstly, to align the e-selection with legal requirements. Secondly, e-selection enables organisations to operate and manage more efficiently the process of identifying and selecting the best fit for the job candidates in terms of knowledge, skills and abilities and experience. Thirdly, e-selection is a transparent and accurate process and provides more evidence of the effectiveness of the selection criteria. E-selection takes the recruiting process a step further and involves decision-making about deciding on the applicant that fits. Selection therefore means 'cherry-picking' from among qualified applicants to hire into an organisation (Gill, 2001). This process involves a number of steps and actions which include applications, CVs, interviews, reference checks, etc.

3.13.1 Advantages of e-selection

The rationale for adopting e-selection for an organisation is that it alleviates inconvenience, and reduces the costs and time required to conduct the selection process. It enhances the operation of the selection techniques and allows for greater flexibility in the selection. According to Suchitra (2014:5) *“The purposes of e-selection are mainly three (a) achieving cost reduction, (b) maximum utilisation of human capital, and (c) sustainability”*. The second objective, maximum utilisation of human capital, *“is being achieved through high retention rates, increased percentage of candidates who meet employment requirements and improved productivity after the new hires.”* The third objective of e-selection, sustainability, *“refers to the organisation’s ability and willingness to maintain the e-enabled system and also progressively evolve the system to satisfy changing requirements.”*

According to Kehoe et al. (2005), the e-selection process provides a range of important advantages over traditional systems. These include:

- 1) providing organisations with greater numbers of recruits
- 2) streamlining the job analysis process
- 3) speeding up the development and assessment of selection procedures
- 4) reducing administrative burdens by automatically screening applications to ensure that applicants meet basic job requirements

- 5) allowing organisations to interview applicants using web-based or video conference methods
- 6) facilitating the storage and use of applicant information, allowing for the assessment of selection system effectiveness (e.g., by validating inferences made in the selection process).

3.13.2 Flaws of e-selection

Although e-selection has many advantages and is widely used and has the added value to improve organisations' recruitment and selection practices and quality services of HR department, it is not flawless. It has some pitfalls to consider before moving to an e-selection strategy, these include: security of contact, cheating, privacy and security of responses and legality of screening and selection tests which can range from a very simple process to a very complicated process depending on the firm hiring and the position. Certain employment laws such as anti-discrimination laws must be obeyed during employee selection.

In conclusion, recruiting and selecting the right person for the right job is one of the most challenging roles of human resource management. HRM is traditionally renowned for its paperwork and bureaucracy and the advent of electronic HRM aims to alleviate the administrative burden. The hybrid nature of the emerging role of e-HRM suggests that organisations that smartly mix conventional HRM processes with effective e-HR are more likely to achieve a higher success rate.

The HR department needs to embrace and exploit technological tools to optimise the benefits and minimise the flaws. e-recruitment and e-selection enable organisations to attract a highly skilled and more diverse workforce as opposed to the conventional selection system. e-recruitment and e-selection can give an organisation a substantial competitive edge in a volatile world of work in need of a skilled workforce. e-recruitment streamlines this process thanks to a technological solution that manages the process of recruitment from start to finish.

However, an unplanned and untimely use of e-selection may be of waste time and money and may have a negative impact on some deprived groups of society, as Stone and Dulebohn (2013:48) clearly states:

the “blind” use of e-selection systems may result in an adverse impact for members of some subgroups. For example, these systems require that applicants have computer access and computer related skills. However, studies (e.g., Pew Internet and American Life Project, 2010) reveal that members of age, sex, and racial subgroups are less likely to have such skills than majority group members. Thus, the sole reliance on e-selection systems by organisations may adversely affect the employment opportunities of various subgroup members.

3.14 e-Learning

e-learning is a multi-dimensional activity which consists of the use of the internet or an organisational intranet to conduct training online. It has become increasingly widespread because almost every organisation's HR department has a training

programme on its agenda and a number of employees, who need training. Although the term e-learning is widely used, it means different things to different people. Epignosis LLC E- (2014) points out: *'While the term "e-learning" has been thrown around quite a lot in recent years, many are still unaware of what it actually means and how it can help them achieve success in both their professional and personal lives'*. Thus, e-learning is a multi-faceted process and, learning is just one element of education. Some experts argue that, the scope of online education offers a much broader range of services than the term e-learning. Thus, the expansion and proliferation of e-learning as a popular method of learning over the last few decades is clearly demonstrated by the figures in the CIPD's 2015 Learning and Talent Development Study, 74% of companies stated using some level of e-learning with 91% of companies indicating that e-learning is useful when combined with other methods and nearly three-quarters of respondents viewed it as essential for learning.

e-learning has been explained and defined in many ways. For instance, Paulsen, (2003) suggests that electronic learning is interactive learning in which the learning content is available online and provides automatic feedback to the student's learning activities. Rosenberg (2001) views e-learning as the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance. Khan (2001) suggests that, e-learning encompasses Web-based learning (WBL), Internet-based training (IBT), advanced distributing learning (ADL), and online learning (OL). Govindasamy (2002) claims that e-learning is instruction delivered via all electronic media such as the Internet, Intranets, extranets, and

hypertext/hypermedia documents. However, the most commonly cited definition of e-learning is the one suggested by CIPD (2013) as *'learning that is delivered, enabled or mediated using electronic technology for the explicit purpose of training, learning or development in organisations.'*

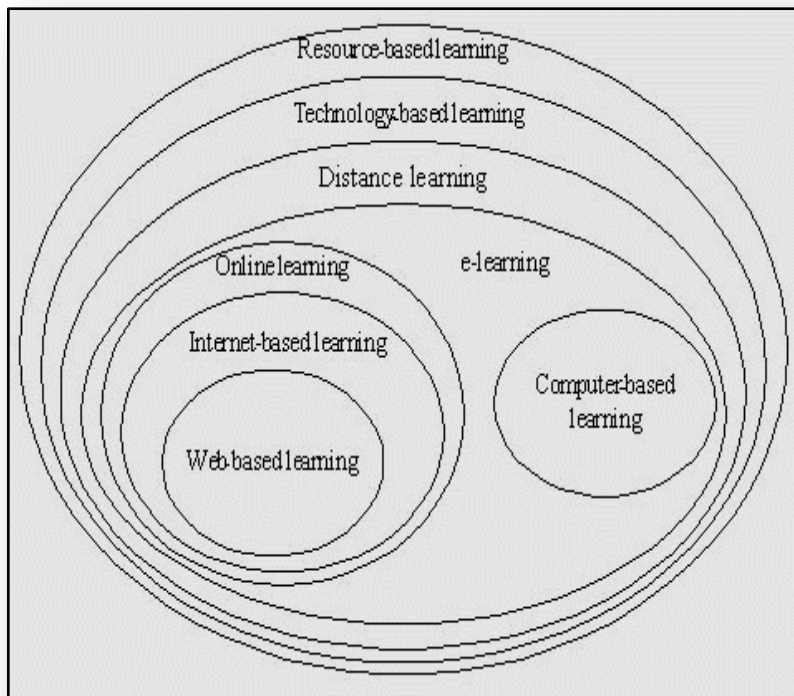
The above definitions clearly show that e-learning conveys different shades of meaning and takes different forms. This view is echoed by Kaplan-Leiserson, (2000: 66) who argues that: *"e-learning covers a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio and videotape, satellite broadcast, interactive TV, and CD-ROM."* The multifarious tags and terms used to describe e-learning can be illustrated by some of the labels used, such as: *'open learning, flexible learning, individualised learning, computer-aided learning, project-based learning, problem-based learning, student-centred learning and self-organised learning'* (Anohina, 2005). Many other labels have also been cited such as *"Internet-based education", "Internet-based learning", "Internet-based training", "technology-based learning", "computer-managed learning."* Other scholars who have studied e-learning also use terms which suit their purpose. For instance, Kearsley (2000) calls it *"online education"*; Ryan (2000) uses the term *"resource-based learning"*; Jolliffe et al. (2001) call it *"Web-based learning"*; Horton (1999) employs the terms *"Web-based training", "Web-based instruction", and "Web-based education"*. Picciano (2001) presents the whole list of terms that refer to the educational process in which a teacher and students are physically separated including,

“distance education”, “distance teaching”, “distance learning”, “open learning”, “distributed learning”, “asynchronous learning”, “tele learning”, and “flexible learning”. He points out that these terms are used interchangeably with “distance learning”.

Anohina (2015:5) adopts the term *“virtual learning”* Anohina (2015:5) argues that the word *“virtual”* means *“different, peculiar”*, so under the term *virtual learning*, we understand the learning process that differs from the traditional learning process and that has such features. The learning process is based on some technology partly or entirely replacing a human teacher; if the role of human teacher is partly replaced by some technology then a teacher and a learner can be separated by time and place, but in this case communication between them is provided; A learner can choose time, place, pace and amount of learning.”

The gist of the debate is that, e-learning is a form of computer based education or training that enables employees or students to learn anywhere and at any time. The following figure shows how the terms *“computer-based learning”, “distance learning”, “e-learning”, “Internet-based learning”, “online learning”, “resource-based learning”, “technology-based learning”, and “Web-based learning”* overlap in content and form:

Figure 3.6: Terminology used in the field of virtual learning



Source: Anohina, (2005). Analysis of the terminology used in the field of virtual learning. Educational Technology & Society, 8 (3), 91-102

As can be seen there is no consensus or commonly agreed definition of e-learning. It is an umbrella term which covers many areas. It is thus worth distinguishing between learning and training. Epignosis LLC E- (2014:22) suggests "*Learning is the process of absorbing information in order to increase skills and abilities and make use of it under a variety of contexts.*" In contrast training is providing

“information and knowledge, through speech, the written word or other methods of demonstration in a manner that instructs the trainee. Training is the giving of information and knowledge, through speech, the written word or other methods of demonstration in a manner that instructs the trainee.’ Training is the process each new employee goes through when joining a company to learn how to carry out the day-to-day operations.”

According to CIPD (2013) e-learning includes three main categories:

- a) Formal e-learning,
- b) Informal e-learning and
- c) Blended e-learning.

In formal e-learning, technology is used primarily to deliver formal content such as training courses without important support or interaction with training professionals. There are growing opportunities for technology to assist informal e-learning in the workplace.

3.14.1 Advantages of e-learning

The breadth and depth of e-learning literature demonstrates that it is a research area which has attracted a lot of attention and it still generates plenty of interest from both academics as well as professionals. The importance, benefits and advantages of e-learning have been extensively highlighted (Nenwani and Raj, 2013). The majority of authors seems to provide similar or overlapping advantages.

For instance, Welsh et al. (2003) suggest six reasons why organisations should consider the use e-learning systems, they:

1. Provide consistent and worldwide training
2. Reduce delivery cycle time because through e-learning the companies are able to deliver training to many people quickly.
3. Increase learner convenience.
4. Reduce information overload.
5. Improve employees tracking.
6. Lower costs.

In addition, a study conducted by CrossKnowledge, Fefaur and Ipsos (2015) provides clear evidence on the place of e-learning within European companies' training strategies and projects a better picture of its application. The study findings revealed that *'In the UK, Spain and Benelux, nearly 40% of companies train more than 50% of their employees via e-learning. France lags behind at only 17%. E-Learning is most used within the services sector – 43% of service-based companies train more than 50 % of their employees via e-learning.'*

In short, e-learning is commonly practised by companies throughout the world. The main aim of e-learning, in addition to other learning technology solutions, is to hone the skills and enhance the expertise of their employees in order to develop a highly-skilled, motivated and knowledgeable workforce. Training can be programmed through e-learning, blended learning, online or the virtual medium.

The key advantages of e-learning have been suggested by Optimus Learning Services (2013):

- Flexibility – e-learning can be done in short periods of time that can fit around the employee's daily schedule
- Mobile – as e-learning can be done on laptops, tablets and phones, it is a very mobile method
- Lower cost
- Tailored for your organisation
- Technological possibilities

In the same vein, Upperapally (2015) suggests an almost identical list of e-learning advantages:

1. **Flexibility:** one of the key distinguishing features of e-learning from traditional learning is flexibility as candidates can undergo training at their own comfort, pace, and time.
2. **Faster delivery:** e-learning courses' delivery is less time consuming than the traditional training courses.
3. **Easy to update:** Updates can be rolled out instantly and easily with the help of online training; any changes can be made within the course faster.
4. **Cost effective:** Printing and travelling costs can be saved as the learner takes the course online and there is no need of any training material.

5. Increased retention: Most of the e-learning courses include images, audio, and video. Learners retain more information from both text and pictures than from text alone. This will increase the learner's retention and makes the course more effective.

3.14.2 Disadvantages of e-learning

Although e-learning has gained in popularity and increased development and has been adopted by many organisations and institutions, it is not criticism free. The issue of technological availability is a serious concern. Unless such technological infrastructure is available, online e-learning cannot be achieved. For example, poor internet connection and unavoidable general random faults can also interrupt learning. In addition, there is no face-to-face interaction. Absence of face-to-face interpersonal communication, facial expression, and eye contact are very important in transferring ideas and motivating students to focus during training sessions (Selim 2007). The isolated environment, and questions about the suitability of the presented course contents (Weaver, 2008; Wallace, 2000) have been a cause for concern.

3.14.3 Learning styles and preferences

There is a general consensus that individuals differ in the ways and styles they use to help them to learn. Each person has their preference of learning styles and techniques. In general people use a mix of learning styles. Some people may find

that they have a dominant style of learning, with minor use of other styles. Others may find that they use different styles in different circumstances and situations. As a result, e-learning might not be accepted, or at least preferred, by some employees. Hence, HR officials within an organisation must take into account the learning methods that are best accepted and suited to their employees. Moreover, they need to make sure that trained employees possess the necessary computer skills to optimise their benefits from e-learning materials. Also, HR within organisations needs to assess how a shift from traditional training to e-learning will benefit the organisation and its employees (Gonzalez, et al 2011).

The following table summarises the advantages and disadvantages of e-learning:

Table 3.6: Advantages and disadvantages of e-learning

e-learning advantages	e-learning disadvantages
Trainee can proceed on their own time	Not all trainees may be ready for e-learning
Allow consistency in the delivery of training	Not all trainees have expertise and access to internet/computer
Incorporated built in guidance and help for trainee to use when required	Not appropriate for all types of training (for example leadership and cultural change)
Relatively easy for trainer to update contents	Requires cost and time to build e-learning system
Can be used to enhances instructor led training	No evidence for greater learning

Source: Aswathappa (2008) Human Resource Management, Text and Cases, 2008:691

In conclusion, e-learning provides a wide range of benefits and choices. Some of these advantages have been highlighted at length in the literature including convenience, time, cost effectiveness, consistency, flexibility, mobility, a wide variety of course options and choices, lifelong learning, social equity and access, more advanced information, financial benefits, and multimedia-rich contents (Bates, 2005; Rosenberg, 2001). Thus e-learning offers diversity and scope and can be as effective as traditional face-to-face interaction with learners or trainees (Neuhauser, 2002; Russell, 1999). The overarching conclusion that can be drawn is that trial and error is required to formulate the right e-learning approach for organisations as the literature is not conclusive enough to say which e-learning method or style works best.

3.15 e-Compensation

All companies, regardless of size, have compensation systems and are responsible for compensation planning. Compensation and reward systems are vital to attract, motivate and retain employees in any organisation (Wright and Dyer, 2000). As a result, a growing number of organisations are turning to technology to facilitate their task and have started enhancing their compensation systems through the usage of intranet and internet. The usage of intranet and internet for compensation planning is called e-compensation management. This is explained further by Dulebohn and Marler, (2005: 67) who state that '*E-compensation represents a web-enabled approach to an array of compensation*

tools that enable an organisation to gather, store, manipulate, analyse, utilise, and distribute compensation data and information"

e-compensation tools allow HR managers to effectively adapt compensation systems to deal with the current challenges, manage and maintain all aspects of equity in pay plan design, and to align the compensation systems with the strategic management of the organisation. Dulebohn and Marler (2005) highlight three key ways in which e-compensation tools help the HRM professionals in dynamic and competitive environments:

1. Increase access to critical compensation information (for example: knowledge management databases, best practices internal and external, individual equity design, competitive information) by simply on an as-needed basis without dedicated IT staffs and sophisticated IT infrastructures,
2. Enable round-the-clock availability of meaningful compensation information to managers and employees company-wide, thus making critical compensation information more available to support decision making,
3. Streamline cumbersome bureaucratic tasks through the introduction of workflow functionality and real-time information processing, so the HRM professionals' productivity can be increased.

Moreover, technology contributes to compensation satisfaction through transparent service delivery. e-compensation systems allow managers to develop budgets, implement and administer the compensation process to ensure the fairness of

salary allocation decisions (Dulebohn and Marler, 2005; Stone et al., 2003). HR managers use the e-compensation system to make appropriate decisions in terms of salary administration or changes, bonuses and rewards for both employees and leaders (Panayotopoulou et al. 2007). According to Wright and Dyer (2000: 59) compensation and reward systems give institutions a competitive edge in attracting and retaining a skilled workforce.

An e-compensation system cannot be underestimated as it consists of making more efficient HR practices by increasing efficiency through streamlining HRM operations (Marler, 2009). It offers mechanisms that facilitate among other things:

1. Employee information
2. Attendance record
3. Leave record
4. Generate pay slips
5. Annual returns (TDS Forms)
6. Training and induction programmes

3.15.1 Advantages of e-compensation

The perceived need for e-compensation can be summed up as follows:

- To maintain uniform, error free, accurate compensation
- To retrieve past records within seconds
- To protect the data

- To manage the pay package for an international work force
- To link other system like performance appraisal, training, recruiting

Source: (Manidipa, 2015).

Similar benefits of e-compensation have been suggested by Dulebohn and Marler, (2005):

- Easy accessibility to the information without any requirement like a special IT infrastructure or knowledge.
- Round-the-clock availability of the meaningful compensation information in detail for employees, managers and HR professionals (for decision support) according to their credentials in an interactive way
- Streamlining the cumbersome bureaucratic tasks through the introduction of workflow functionality and real-time information processing in a cost-effective manner (Dulebohn and Marler, 2005).

3.15.2 Disadvantages of e-compensation

Technological advancement has changed the way HR does business, raising it to a higher standard by enhancing HR performance and better delivery service. However, with regards to e-compensation, as Gray (2015) points out, human resource information systems do not yet provide integrated analytic features needed for compensation market planning and decision support, such as the ability

to also see related real-time competitive salaries. Gray (2015) highlighted some e-compensation flaws, arguing that it is:

- a. slower, as run over the internet - internet not always 100% available.
- b. interfaces often not as sophisticated
- c. e-compensation systems can take longer to develop as they are more complex - have to support different browsers, and different versions,
- d. Security risks

3.16 e-Performance

Personal Development and Performance Review (PDPR) is an opportunity for the employee within an organisation to reflect on their contribution, self-assess their performance and identify any Continuous Professional Development (CPD) needs. e-performance appraisal provides managers with information on how to conduct a performance appraisal, using specific criteria and measurements in order to capture, store, analyse, rate and report the employee personal activities so that HR managers are informed about employee strengths and weaknesses, employee performance levels, and take the right decisions about them.

The e-performance system is pertinent because it contributes to the smooth running of the HRM role and allows managers to make the right decisions in appraising their employees. Farr et al., (2013) stress the benefits of e-performance as follows:

1. Making administrative decisions like pay increase and promotions.

2. Providing feedback to employees about their work and developmental needs
3. Criteria for the assessment of HR systems like selection procedures or training programs.

In addition, Cardy and Miller (2005) highlighted similar advantages using e-performance appraisal processes such as:

1. Facilitate the process of writing reviews
2. Greater span of control.
3. More and cheaper feedback.

In summary, e-HRM emerged and is prevalent within HR departments across the world. There is no doubt that the various e-HRM activities such as e-recruitment, e-selection, e-learning, etc. are business solutions which have taken HR to a different level by providing complete online support to management in performing their role more effectively. The benefits and advantages of the wide range of e-HRM activities are greater than disadvantages because they are cost effective, accurate, user-friendly and accessible to wider users.

In general e-HRM consists of implementing human resource strategies, policies, and practices in organisations through web-technology based tools. In short, e-HRM sustains some of HR key activities and as Parry and Tyson, (2011) claim, may be used to manage employee information across the entire employment cycle.

3.17 Challenges and drivers (enablers) influencing the implementation of e-HRM

To keep pace with the rapid technological progress, the intensifying knowledge economy and the growing social media networks, human resource management within an organisation needs to adapt and adopt e-HRM to meet the demands and needs of the organisation and the employees. Thus, the need for integrating e-HRM has become imperative to face the HR challenges of the 21st century and provide more efficient and effective delivery of HR services. It has been widely acclaimed that the potential benefits of e-HRM provide faster information processing, greater information accuracy, enhanced planning and development, and better employee communication. There is a plethora of studies which investigate e-HRM, focusing on the ways and means of adopting and using information and communication technology (ICT), to determine and assess the drivers and barriers that have a direct bearing on the adoption of e-HRM systems (Bondarouk, et al. 2009; Chakraborty, and Mansor, 2013; Lengnick-Hall and Moritz; 2003, Panayotopoulou et al. 2010; Ruël et al 2004). The broad literature also suggests that the use of e-HRM would be cost effective by automating information and reducing the number of HR employees; by empowering employees to control their own personal information; and by allowing managers to access relevant information and data, make decisions, and communicate with others without referring to a HR professional. As Lengnick-Hall and Moritz; 2003: 366) point out:

With e-HRM, managers can access relevant information and data, conduct analyses, make decisions, and communicate with others - and they can do this without consulting an HR professional unless they choose to do so. For example, a manager who wants to make a merit pay decision may access files containing text, audio, and video describing how best to make the decision. Then, the manager can access the data file containing information on his/her employees. With a click of the mouse, the decision is recorded and other departments (such as finance) are notified. Hours of processing are reduced to minutes, and much paperwork is avoided by the use of this technology.

e-HRM is a research area that has been studied from different perspectives involving a wide range of sectors. However, there is a knowledge gap in terms of the applicability of the existing theoretical base, particularly in non-Western countries. In contrast, e-HRM in Europe is widely used as Strohmeier and Kabst (2009:488) argue

e-HRM is a common practice throughout Europe since two-thirds of all organisations have already adopted e-HRM. Major general determinants of e-HRM adoption are size, work organisation, and configuration of HRM. In addition, there are major cross-national differences in e-HRM adoption, unexpectedly revealing Eastern post-communist countries to lead e-HRM adoption.

To ensure successful e-HRM implementation, a full MOT of the HR department setting and activities within the organisation must be performed. According to Lengnick-Hall and Moritz (2003: 369) *“most organisations that adopt e-HRM rely on available, accessible, and tangible measures to make a business case for the investment.”* However, integrating and implementing e-HRM within HR can be a serious challenge. Many scholars agree that the challenges and constraints of implementing computerised human resources functions within organisations can be a source of deterrence. Similarly, Bowen and Oestroff (2004) argue that the decision to implement appropriate human systems, including a human resource information system, has become the key driver to changes in human resource management in all organisations particularly the public sector where quick implementation has led to failure and less effectiveness, in addition to the cost of investing in installing the systems.

The substance of the debate about adopting e-HRM shows conflicting views. Some argue that there is no one best approach, and there is no old set of principles that needs to be replaced by a new set. Rather, continuous and creative initiatives need to be taken in order to maintain high standards of HR activities' delivery and performance, and these are generated and influenced by a host of circumstantial, internal and external factors (Ruël and Bondarouk, 2014, Alghafri 2015, Stone and Dulebohn 2013, Voermans and van Veldhoven 2007). The organisations that adopt e-HRM implementation successfully are those that make conscious and distinctive choices about what principles to follow and their level of readiness. There is no one size fits all model. No one strategy or approach is a panacea or a master plan that

guarantees successful e-HRM adoption. Additionally, adopting e-HRM is not just about managing the “technical” side of technology. Successful implementation of e-HRM depends on the existence of the right conditions. Different environments and different cultural settings require the use of different approaches to e-HRM. The way HR operates now and in the future will be driven by information and communication technology (ICT) (Bondarouk and Ruël, 2009; Gardner, et al, 2003; Gupta and Saxen, 2011; Hoch and Dulebohn, 2013). Thus, to optimise the use of e-HRM and to ensure it is successfully implemented requires a collective effort, readiness, planning and full support from top management, the commitment of human resource staff, complete know-how regarding e-HRM process, computer knowledge of human resource staff and human resource information system training and selecting appropriate ICT tools for use. These are considered important predictors of success or failure of e-HRM.

3.18 Why organisations need to adopt e-HRM

In a highly globalised world characterised by fast growing technology and an unstable world economy, organisations are continuously seeking to optimise the configuration of their internal resources in order to fulfil their role and to effectively deal with the challenges posed by a variety of factors. Thus the adoption of e-HRM enables the organisation:

- To have a HR department fit for purpose in order to compete effectively in a complex and dynamic environment

- To maximize employee performance as a unique source of competitive advantage
- To empower employees
- To achieve and maintain sustainable progress by reducing cost and paperwork.

Moreover, as the workforce is becoming more diversified, multicultural, multinational, even global, particularly in the GCC countries, organisations are compelled to find more efficient ways and means of storing personal data as well as tools that would make employees feel "empowered" and connected to the organisation. e-HRM has come to the rescue as a solution provider to organisations' complex human capital.

The literature provides a wide range of factors which influence both the capacity of the organisation to implement e-HRM and its fitness to achieve the target of the intended goals. It seems therefore, pertinent to review these in order to understand, analyse, and highlight the factors that influence the adoption of e-HRM technology. For instance, Bondarouk, Parry and Furtmueller (2016) published an article entitled: *'Electronic HRM: four decades of research on adoption and consequences'*. The authors claim that: "A consistent finding about the 40 years from 1970 to 2010 is that all the implementation factors identified could be categorised into technological, organisational, and people factors."

Additionally, Arjomandy (2013:1) indicates that successful e-HRM adoption mostly depends on three kinds of factors: *“Organisational (contextual) factors which are related to the organisation itself, and Actorial factors which are related to the employees which are supposed to interact with the system and External factors which connect the environment to organisation.”*

Following and adopting Bondarouk’s and Furtmueller’s, (2012) e-HRM implementation factors which were categorised into *“technological, organisational, and people factors.”* Kuipers’ (2017) research also divided the implementation factors into the above three, which he labelled ‘TOP’ factors. (Kuipers 2017:10). The following figure illustrates the research map:

Figure 3.7: Digital HRM environment-in-action



Source: Kuipers (2017:10). Implement e-HRM successfully? A study into the criteria to successfully implement e-HRM.

Kuipers (2017: 13), inspired by Bondarouk et al. (2015), argues that one of the “TOP” factors playing a vital role in the process of successful implementation of e-HRM, is the people factor. *“People factors include both managers and employees, also known as the internal customers (Bondarouk et al., 2015), which are those that work with the e-HRM systems.”*

Despite the acclaim and potential benefits of e-HRM, implementation initiatives do not always go according to plan. Many argue that the adoption of IT does not always enhance HRM performance of service delivery (Ruël and Van der Kaap, 2012; Stone, et al, 2015; Tansley, et al, 2014). Some e-HRM projects experience problems early on in the process due to several factors. Others simply end in failure and are unable to transform the HR function. According to Dery et. al. (2013) this *“reflects the overly simplistic view of the relationship between technology and organisation that pervades much of the debate about these systems in the HR literature.”*

Pant et al (2012:8) reiterate a similar view arguing that:

Not all organisations are likely to derive benefits commensurate with the costs of implementing an e-HRM system. Our research findings suggest that many organisational and environmental factors must be present for organisations to derive benefits that will outweigh costs. We have identified three such contextual factors: IT Factors, Employee Factors, Organisational Communication Factors.

- a. The **IT factor** according to Pant et al (2012) consists of integrating e-HRM systems into the organisation's information technology infrastructure. A reliable and efficient information technology facility is a prerequisite for e-HRM implementation. The availability of computers, programs, networks, and the expertise to create good systems is considered as a key factor in creating good

information systems (Ruta 2005; Strohmeier, 2007; Marler and Fisher, 2013; Barrett and Oborn, 2013).

- b. **Employee factors** - Human capital which consists of the knowledge, skills and abilities and experience of individuals within the company, seems to be a determining factor for the success or failure of e-HRM systems in organisations (Dessler, 2003; Parry, 2011; Bondarouk and Ruël (2009). Employee factors include education level of employees, their knowledge and skills regarding information systems, and the nature of the industry - seem to play a crucial role in the employee's readiness to use e-HRM systems. (Pant et al 2012)
- c. **Organisational Communication Factors** - Effective organisational communication, in terms of consistency, transparency and accuracy, performance feedback, and adequacy of information about organisational policies and procedures, plays a major role in achieving organisational success (Harris and Nelson, 2008). Communication is a multidimensional term and difficult to define succinctly, meaning different things to different people (Deetz 2001). Goldfarb (1990:4) states: *“Employers are becoming more aware that employee loyalty, commitment, and concern for quality depend on effective employee communication.”*

In the same line of thought, Banerji (2013:438) highlights key factors and challenges affecting the use of HR technologies. In his view the use of technology-oriented processes in an organisation are affected by various factors, as follows:

- **Employee orientation** -The employees of the organisation need to be convinced by the fact the use of technology in the processes will help in generating better and improved results compared to the existing processes.
- **Work culture** – This also affects the acceptance of the implementation of new systems in an organisation. The dimensions of better results can be timely and accurate information, ease of use and completion of work in lesser time.
- **Security concerns** - A system or technique designed for one country may not be effective in another country. Implementation issues across boundaries comes with the challenges of data privacy and data movement across boundaries.
- **Cost factor** - Cost is an important factor to be taken into consideration before implementation of the e-systems. The companies must prioritise and take the decisions of acceptance and implementation of e-systems on the basis of vital, essential and desirable operations.
- **Training and learning** - The process of training and adaptation to the new e-system be a cumbersome and time consuming process. It may be challenging for the users if they do not find it user friendly.
- **Technical limitation** - An organisation cannot depend on technological websites or software completely to handle every issue related to HR. A website cannot ever replace a skilled professional. Employees may not be able to make sense of choice from the website and may need to discuss the issues personally with HR experts or professionals, in case of doubts, faced by them.

As can be seen, different authors tend to use different terminology and phraseology and approaches in describing the factors which have a direct bearing on the implementation of e-HRM. Many of the highlighted factors are overarching and overlapping in meaning and in practice with potentially similar outcomes. In general, the findings of the majority of previous research studies on e-HRM tend to allude to the fact that factors influencing the adoption of e-HRM are far from being universal (Bondarouk et al. 2016; Parry 2011; Strohmeier and Kabst 2014; Marler and Fisher, 2013; Bowen and Ostroff 2004; Dulebohn and Marler, 2005; Bondarouk and Ruël, 2009 etc.) The diversity of the influencing factors driving the adoption of e-HRM highlighted at length in the literature indicate that there is no one size fits all model or factors that are exchangeable or exportable to different organisational settings. This leads the researcher to argue that e-HRM is multi-faceted and that, in practice, e-HRM is not necessarily compatible with every organisation. What is suitable and workable for some organisations may not be appropriate for others.

Ma and Ye (2015: 6), for instance, provided different sets of factors that stimulate the integration and use of e-HRM: *“clarity of e-HRM goals, user satisfaction with e-HRM, perceived usefulness, perceived ease of use, intention to use e-HRM, user support, social influence, and facilitating conditions.”* Ma and Ye (2015:6) views the above factors as *“the important factors connected with attitude of the HR professionals towards using e-HRM. This information is vital when designing implementation methodologies.”*

Other studies provide similar factors that influence e-HRM using different labels. What transpires from the literature indicates that what drives the successful implementation of e-HRM is first and foremost, the extent to which e-HRM is embraced by the HR department employees. Dealing with resistance to change i.e., the degree to which staff feel threatened by the system, is then followed by the second significant factor, the system's viability and effectiveness. As Stone, et al (2013:52) assert:

Models of electronic HRM (e-HRM) systems (e.g., Stone and Lukaszewski, 2009; Stone, Stone Romero, and Lukaszewski, 2006) contend that two factors determine their acceptance (i.e., the degree to which individuals react favourably to the system) and system effectiveness: (a) the nature of e-HRM system and (b) the attitudes and abilities of individuals who use them (e.g., applicants). In addition, the values, goals, and abilities of applicants affect system acceptance and use. Ideally, e-selection systems should be designed to be congruent with the values and abilities of applicants (Stone et al., 2006).

Similarly, Al-Dmour, and Shannak (2012) considered a range of overlapping factors which need to be taken into account to enable the implementation e-HRM within Jordanian shareholding companies. These are internal and external factors:

Internal Factors

- Organisation resources

- Organisation readiness and commitment
- Organisational sharing culture
- Organisation's demographic: type, size and experience
- Organisation's HR structural characteristics
- Perceived IT applications benefits
- Perceived barriers to the implementation of e-HRM

External Factors

- Industry characteristics
- Macroeconomic factors
- Government policies

Source: Al-Dmour, and Shannak, (2012:209).

Saleh (2014) highlighted four main factors which influence the acceptance and implementation of e-HRM technology. These factors are workforce acceptance, organisational features, technological capabilities, and work environmental determinants. It can be argued that successful implementation and use of IT in HR can also be influenced by various factors like economic, political, social, cultural as well as organisational, technological and environmental factors. Additionally, cultural values, social attributes, norms and habits, beliefs, economic scale, legal regulations, political and governmental issues influence the adoption of new technologies like e-HRM systems (Saleh 2014). The people factors outweigh the technological factors of e-HRM because, as Bondarouk (2014) argues, people

constitute the key asset of an organisation, their needs determine the success of e-HRM.

The gist of the debate regarding the e-HRM adoption factors in the literature revolves around key factors affecting e-HRM implementation. A range of factors with different labels and terms have emerged over the last four decades such as: internal, external, cultural, managerial support, organisational structure, technological infrastructure, and work environmental factors. However, there is no evidence that indicates that these e-HRM implementation factors have been translated fully into processes and successfully implemented in practice. It is probably safe to say that relatively little research has been devoted to the task of empirically validating such theoretical factors. This study takes the view that vision and decision making, organisational cultural, people and work settings shape e-HRM adoption processes in unique ways. Even if the words used to label factors, HR activities or outcomes are the same, what exists on the ground will inevitably be influenced by particular characteristics in each and every instance. Despite the fact that e-HRM has come a long way in such a short time to become one of the most implemented applications in organisations (Lee 2011), theory and research on electronic human resource management (e-HRM) is in its infancy (Stone and Dulebohn, 2013). In other words e-HRM theoretical knowledge appears to lack depth and breadth, as Parry and Strohmeier (2014) underline: *“we still lack a broader e-HRM discussion.”*

Based on the benefits and advantages that e-HRM adoption provides, the majority of studies conducted have credited e-HRM with cost effectiveness and modernisation of the HR department on the condition that the required resources are readily available. Bondarouk and Brewster (2016: 14) argue that the availability of resources is vital in e-HRM adoption:

Bondarouk, Schilling and Ruël (2016) explored the adoption of e-HRM by multinational subsidiaries in an emerging economies context, and found that availability of the resources played a crucial role in e-HRM adoption and that, overall, challenges in e-HRM were found to be related to the complexity of legal, political and economic systems, as well as to the predominantly administrative role of the HRM function in such contexts.

Bondarouk, et al. (2015:4) published a paper entitled: '*Does e-HRM lead to better HRM service?*' They concluded that e-HRM is making an encouraging contribution to improving e-HRM service delivery: "*e-HRM is having a positive impact on HRM services through the simplification of processes, the provision of accurate data and enhancing the perceptions of line managers and employees of HRM services.*"

According to Bondarouk et al. (2015: 99) e-HRM literature albeit fragmented projects a rather positive picture about e-HRM promises: "*While the tone of the literature is generally optimistic about the potential of e-HRM..... researchers*

increasingly call for more empirical studies to inform conceptualization of e-HRM adoption and its consequences.”

3.19 Technology Acceptance Models

There is an extensive literature which focuses on e-HR benefits and outcomes and examines the enablers and barriers to adopting IT within HR departments. In contrast, the capabilities of these systems remain somewhat under-researched. Technology acceptance, perceived usefulness, users' mind-set, behaviour patterns are pertinent aspects and worth understanding in order to achieve e-HRM technology adoption. The literature makes reference to several acceptance technology models such as: technology acceptance model (TAM), theory of planned behaviour (TPB) and the Yale Model of Communication and Persuasion (YMCP).

3.19.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is the theory most widely cited and most regularly referred to in the related research. It is attributed to Davis (1986) who himself adapted it from Ajzen, and Fishbein, (1980) Theory of Reasoned Action (TRA). TAM is also in line with Rogers' (1983) theory on diffusion of innovation where technology adoption is a function of a variety of factors including relative advantage and ease of use. TAM aims to determine the user's inclination and acceptance or rejection to use Information Technology. It measures the

acceptance of different types of information systems based on the following criteria:

- Perceived Usefulness (PU), as Davis (1989:320) explains "*the degree to which a person believes that using a particular system would enhance his or her job performance.*"
- Perceived Ease of Use (PEOU) "*the degree to which a person believes that using a particular system would be free of effort*" as defined by Davis (1989:320)
- Attitude \longrightarrow intention to adopt

In essence TAM is an information systems theory that attempts to demonstrate how users come to accept or refute the use of technology. It assumes that the use of a technology system is influenced directly or indirectly by the user's behavioural intentions, attitude, perceived usefulness of the system, and perceived ease of the system. As Davis (1989:67) points out, the model serves:

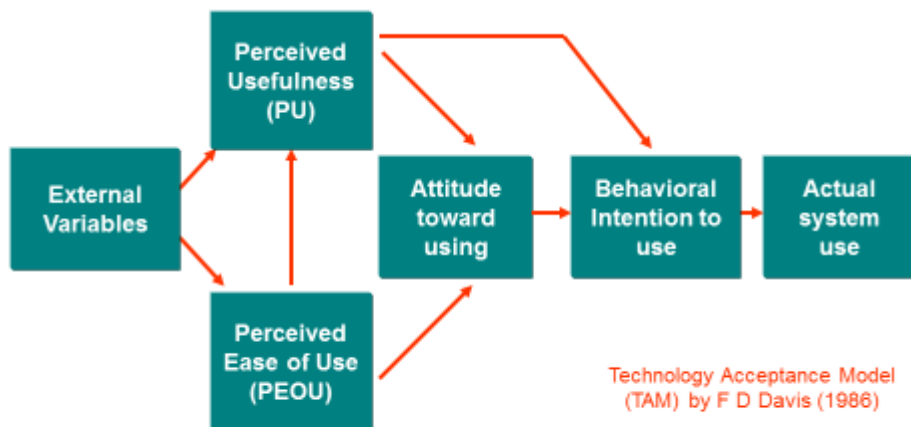
to provide an explanation of the determination of computer acceptance that is generally capable of explaining user behaviour across a broad range of end-user computing technologies and user populations, while at the same time being both parsimonious and theoretically justified.

The TAM model was also used by researchers and practitioners to examine the process of implementation of new technology in the workplace. It works by

assessing the attitude of personnel with respect to new technology over perceived ease of use and usefulness.

The following figure shows the link between actual use and perceived usefulness and perceived ease of use.

Figure 3.8 Davis' (1986) Technology Acceptance Model



Copyright © 2004 Sherif Kamel

Copyright © 1986 Fred D Davis

Source: Davis' (1986) Technology Acceptance Model compiled by S. Kamel

3.19.2 Advantages and disadvantages of TAM

Davis' (1986) Technology Acceptance Model has been used worldwide and contributed to understanding the relationship between the perceived usefulness and perceived ease of use. TAM is a measurement for predicting and for rationalising why a particular technology system may be a cause of resistance or

rejection. This in turn, allows researchers and practitioners to address the issue.

The advantages of TAM (source: Hu,et al. 1999) include:

- a) Valid: Good theory base, significant empirical support
- b) IS/IT Applicable: Applicable to diverse technologies, users, organisational contexts
- c) Understandable: Parsimonious. According to Venkatesh (2000:33), *“The parsimony of TAM combined with its predictive power makes it easy to apply to different situations.”*

However, TAM, like any theory, is not flawless. It has some weaknesses in predicting the behaviour of individuals and organisations which can be summarised as follows.

- Not comprehensive: it ignores IS/IT criteria like:
 - Flexibility (Knoll and Jarvenpaa, 1994)
 - Security (OECD,1996), Reliability (Jonsson, 1998)
 - Privacy (Benassi,1999)
 - Scalability (Berners-Lee, 2000)
 - Standards (Alter, 1999)
- Inconsistent: attempts to make ‘usefulness’ include ‘security’ for example make the model inconsistent (source: *Adapted from Mahinda and Whitworth 2005 The International Conference on Business IT.(BIZIT 2006), August 8 – 10, Kuala Lumpur, Malaysia*)

- Criticism: researchers have “*overlooked essential determinants of decisions and actions [...]*” (Bagozzi, 2007:67). He further argues that the proposed extensions to TAM are “[...] *a patchwork of many largely unintegrated and uncoordinated abridgements*” (Bagozzi, 2007: 252). The focus on extending TAM by introducing new variables has broadened, not deepened it. Similarly, Venkatesh et al. (2007) identified problems with researchers focusing on ‘tweaking’ of TAM, rather than the more important issues in technology adoption
- Why a particular variable influences technology adoption – no real understanding.

3.19.3 Theory of Planned Behaviour

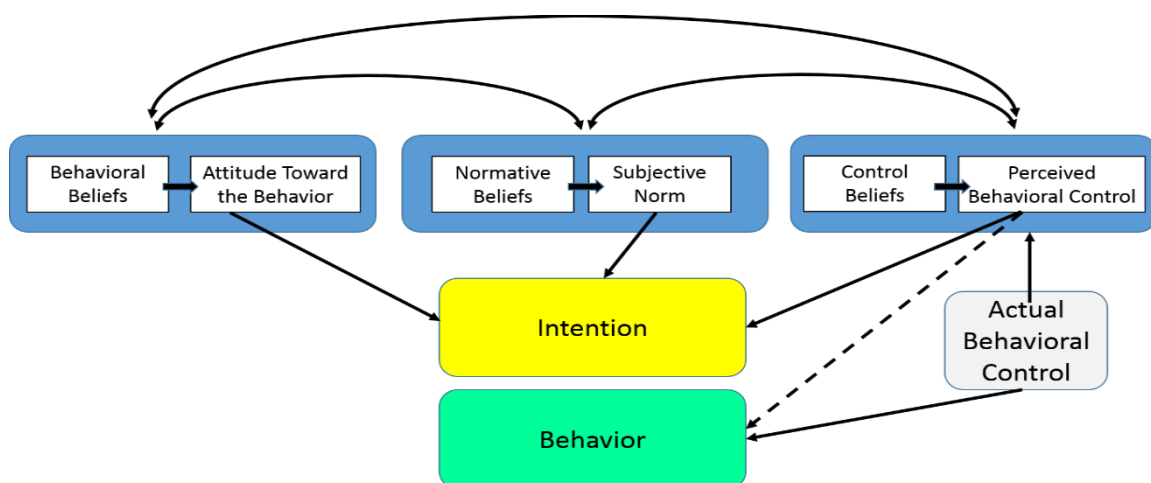
The Theory of Planned Behaviour (TPB) aims to predict an individual's intention to engage in a behaviour at a specific time and place. It suggests that individual behaviour is driven by behaviour intentions, where behaviour intentions are a function of three determinants: behavioural, normative and control beliefs. The TPB consists of six constructs that collectively represent a person's actual control over the behaviour (LaMorte 2016).

1. Attitudes - This refers to the degree to which a person has a favourable or unfavourable evaluation of the behaviour of interest.

2. Behavioural intention - This refers to the motivational factors that influence a given behaviour where the stronger the intention to perform the behaviour, the more likely the behaviour will be performed.
3. Subjective norms - This refers to the belief about whether most people approve or disapprove of the behaviour.
4. Social norms - This refers to the customary codes of behaviour in a group or people or larger cultural context. Social norms are considered normative, or standard, in a group of people.
5. Perceived power - This refers to the perceived presence of factors that may facilitate or impede performance of a behaviour. Perceived power contributes to a person's perceived behavioural control over each of those factors.
6. Perceived behavioural control - This refers to a person's perception of the ease or difficulty of performing the behaviour of interest. (LaMorte, 2016)

The following figure shows the links between these six constructs:

Figure 3.9: Ajzen's (1991)'s Theory of Planned Behaviour



Source: Ajzen (1991)

3.19.4 Limitations of the Theory of Planned Behaviour

The TPB is a research area that has been studied from different perspectives and in many contexts and it is a topic which continues to evolve and attract attention. TPB has demonstrated its relevance and proven benefits in many sectors. However, it has been shown that its shortcomings stem from the fact that it fails to recognise environmental and economic influences.

Several limitations of the TPB, have been listed by LaMorte (2016: 2) as follows:

- It assumes the person has acquired the opportunities and resources to be successful in performing the desired behaviour, regardless of the intention.
- It does not account for other variables that factor into behavioural intention and motivation, such as fear, threat, mood, or past experience.
- While it does consider normative influences, it still does not take into account environmental or economic factors that may influence a person's intention to perform a behaviour.
- It assumes that behaviour is the result of a linear decision-making process, and does not consider that it can change over time.
- While the added construct of perceived behavioural control was an important addition to the theory, it does not say anything about actual control over behaviour.
- The time frame between "intent" and "behavioural action" is not addressed by the theory

As can be seen, e-HRM is multidimensional and covers a wide-range of peripheral areas that involve all aspects of human behaviour and the bonding it has built with IT. Effective implementation of e-HRM requires understanding and addressing the complex interactions that take place between IT systems and the organisational culture. It is important to bear in mind that e-HRM adoption is likely to succeed if accepted by employees who are the driving force of an organisation. The literature findings confirm that perceived usefulness (PU) is found to be a strong predictor of e-HRM usage. e-HRM adoption success is possible if all employees and HR staff are engaged and are empowered during the e-HRM adoption process. Some authors suggested that in order for HR departments to be strategic, they must be aligned with other strategic business units (Strohmeier, 2007). Implementing e-HRM is a collective process which must involve everyone concerned: HR professionals and employees. One of the potential barriers to achieving success in e-HRM occurs when everyone within the organisation adopts an attitude of business as usual as if there is no need for change. Researchers seem to agree that adopting e-HRM is about establishing a 'sense of urgency' and a communication strategy to reduce people's anxieties and concerns. As Zisiadis (2015:21) points out:

for e-HRM to be strategic, it must be used with a strategic intention.

Many of the cases revealed that the systems were used without strategic purposes but rather as tools that could provide automation and cost savings, therefore eliminating any possibility for strategic benefits.

The more prepared a HR department within an organisation is to implement e-HRM, the more likely it is to succeed. A well-thought out e-HRM implementation plan is more likely to lead to the growth and efficiency of the organisation as it will benefit from effective HR transactions, increased speed, less paperwork and better cost effectiveness. Additionally, the HR department within the organisation will become more transparent and employee data easily accessible.

3.20 Does e-HRM make a strategic contribution to HRM?

e-HRM research is polarised between two theoretical streams. The optimists adopt a rhetorical approach, claiming that e-HRM contributes to making the HRM role and function more strategic, albeit without providing the empirical evidence supporting this claim. This view is somewhat supported by Strohmeier (2007:28) who sits on the fence, suggesting that *“while robust results that unambiguously evidence persistent transformations are missing, there are mixed findings and some isolated hints that e-HRM may contribute to a more strategic role of HRM,”* In contrast, Marler and Fisher (2013: 30) express a more explicit view that *“the empirical evidence supporting this perspective is extremely weak”* and *“the evidence in support of e-HRM as an independent agent creating a positive change for HR is extremely weak”*. Bondarouk and Furtmueller (2012:18) acknowledge conflicting stances and conclude that empirical findings are inconsistent and that there is no consensus of opinions whether e-HRM helps to create a more strategic HRM function, indicating that *“scholars have placed increasingly opposed findings into the archives.”*

e-HRM detractors such as Ruël and Bondarouk (2013, 2016); Dery, et al., (2013); Marler and Fisher, (2013), etc., have voiced their misgivings about the capability of e-HRM to transform the HR function of business processes from face-to-face transactions to technology-based multi-self-services (Burbach and Royle, 2013; Zisiadis 2015; Marler and Fisher, 2013). Boxall and Purcell (2011: 39) argue that 'strategy' is a slippery term with several shades of meaning: "*the notion of strategy is subject to a confusing variety of interpretations.*" Barrett and Oborn (2013) concur, stressing that this clash of contradictory views could be the result of an unclear understanding on what "*being strategic*" actually means. Additionally, Marler and Fisher, (2013 Abstract) clearly state that there is lack of evidence that e-HRM enables HR to fulfil a strategic role:

We find no empirical evidence showing that e-HRM predicts strategic outcomes. There is evidence suggesting that strategic HRM predicts e-HRM outcomes and that the relationship appears context dependent, however, research designs are not sufficient to establish causal direction. Our review highlights the need for more empirical studies on e-HRM and strategic HRM outcomes at a macro level.

Broderick and Boudreau (1992: 9) echo the same view, indicating that the way IT is being exploited by HR departments is limited in scope: "*most organisational investments in HR information technology support only a narrow range of administrative decisions.*"

Others contend that despite the fast-growing attention given to e-HRM by both academics and HR stakeholders, they point out that e-HRM has failed to live up to its expectations and promises. However, it can be argued that e-HRM is achieving the basic functions because of the way the people who use it perceive its usefulness. Boudreau and Lawler (2014) highlighted an increase in the use of technology within the HRM profession but found very little had changed in the way organisations utilised HRM functions. As Ball states (2001), HR systems are still being employed for administrative purposes and are less likely to be used for analysis and support aimed at strategic outcomes. However, according to Parry and Tyson, (2010:2) eHRM has partially fulfilled its role but failed in other respects.

Efficiency, service delivery and standardisation goals were commonly realised. Some evidence of a transformational impact of e-HRM was found, as the HR staff had more time and information to support the organisation in achieving its business strategy. However, no evidence was found of an actual increased involvement of HR in business decision-making.

Advocates of e-HRM maintain that e-HRM can do better and is capable of achieving more than simple administrative chores and operational functions, (Ruel et al, 2007; Bell, et al, 2006; Gardner, et al. 2003; Hussain et al., 2007; Parry and Tyson, 2011; Parry, 2011; etc.). Some argue that the e-HRM advantages and benefits gained through process automation may drive HRM toward a strategic role within an organisation (Parry and Tyson, 2011). Snell et al (2002), believe that e-

HRM technology is capable of more than simply automating business processes, enabling organisations to become more strategic and flexible as well as cost-efficient, by supporting people management. (Zisiadis 2015). For the time being, e-HRM is not stretched enough to be more than just doing the mundane burdens of HR. Martin et al. (2005:8) stress the fact that “*the fusion of existing HR practices and technology can alter the way in which an HR department perceives itself, interprets its organisational and strategic environment and does business with its clients and contractors.*” The general consensus among e-HRM researchers argues that there is no conclusive evidence that e-HRM enables HRM to be strategic. Rather, research found HR functions tend to spend more time in planning, organisational design and development, career planning and management development.

Empirical evidence and findings to support the claims that e-HRM drives HR departments to become more strategic are yet to be found. Many authors agree that, the contribution of e-HRM to HRM effectiveness is yet to be translated into practice. This suggests that unanimity on the effectiveness of e-HRM in organisations is yet to achieve its potential. The issue of HRM effectiveness is unlikely to reach consensus across the board. Using a survey targeting a large population sample involving 5665 companies located in 32 different countries, Marler and Parry (2015: Abstract) conclude the following:

We find and show that strategic HR involvement and greater e-HRM capability are both directly and reciprocally related supporting both theoretical perspectives but also showing each is not mutually exclusive.

Thus, further research to broaden and deepen the e-HRM knowledge base needs to be conducted. This is acknowledged by Bondarouk, Parry and Furtmueller (2017: Abstract): *“Despite the existence of a number of recent reviews of e-HRM research, we still lack a comprehensive understanding of the factors affecting the adoption and consequences of e-HRM.”*

In conclusion, too much is expected of e-HRM, considering the short span of its existence. To some extent e-HRM has delivered some promising outcomes concerning the use of e-HRM systems and has boosted HR quality of service, but as it has been widely acknowledged in the literature, there is little evidence that substantiates that e-HRM systems transformed the HR department to play a strategic role (Bondarouk and Ruel, 2013, Bondarouk, 2016; Dery, et al., 2013; Marler and Fisher, 2013; Strohmeier, 2009; Parry and Tyson, 2011). Although the status and role of HR have progressed to a higher level, its function remains administrative not strategic. According to Ruël and Bondarouk and (2012:391), e-HRM has contributed to enhance some HR activities:

With a wide range of uses, e-HRM may support particular HR activities such as recruitment and selection, performance management, compensation and benefits, training and development, health and

safety, employee relations, retention and policies on work–life balance (Enshur et al., 2002) and may be used to manage employee information across the entire employment cycle (Parry and Tyson, 2011).

This means that the expectation that the adoption of e-HRM could transform the function of HR, is not yet supported by the facts.

3.21 Why does e-HRM adoption fail to achieve better success rates?

Under pressure from globalisation and international competitiveness, organisations have sought to remain sustainable and achieve organisational objectives, by investing in information technology. However, despite the fact that electronic HRM is commonly used, and its added value to improve organisational practices and quality of services has been recognised worldwide, it still has many detractors who believe that e-HRM advantages and value are limited and sometimes exaggerated (Bondarouk, Harms and Lepak 2015; Dery et al 2013; Marler and Fisher, 2013 etc.). Similarly, many academics and HR experts are positive about the many advantages e-HRM can bring for HRM but they contend that there is little substance, regarding the extent to which e-HRM contributes effectively and strategically to HRM quality service.

Many studies examined the reasons that cause e-HRM systems to fail to achieve their potential (Hoch and Dulebohn, 2013; Strohmeir and Kabst, 2009; Voermans and Veldman, 2007; Marler and Parry 2015; Dery et al, 2013, etc.) For instance, Theaker and Vernon, (2006) examining the effectiveness of IT in organisations,

cited the Mercer Consulting report:

Over half the survey respondents report that they are ineffective or very ineffective at realising the expected ROI from technology investments. HR people openly acknowledge that they frequently under-use technology and therefore do not gain full benefit.

A similar view is expressed by Bondarouk (2011: 53) who seems to suggest that implementation means full operation of e-HRM at all levels of HR activities. *“I view implementation as complete only when the users are contentedly working with IT and they have acquired the necessary skills to master and fully understand it.”*

The literature presents a prolific number of studies investigating the main challenges to successful e-HRM adoption and the causes for the high failure rate of technology projects. The reasons tend to vary from one organisation to another and from one country to another but they do not differ greatly from one author to another. Findings generally reveal that technology and systems are not to blame. e-HRM adoption failure may be said to be caused by a combination of factors some of which can be summed up as follows:

- e-HRM adoption often clashes with the highly centralised, bureaucratic structures of some organisations.
- Organisation embarking on e-HRM implementation without adequate planning and with insufficient resources.
- Lack of adequate IT infrastructure and e-HRM strategy not thought through
- Resistance to change driven by organisational culture

- Poor IT knowledge of the HR department and employees
- Lack of senior management support and HR staff commitment
- Poor inter-organisational communication.
- Lack of real employee empowerment
- Unclear HR goals or vision
- e-HRM is seen as a HR management issue only
- Employees, including managers, lack of IT skills
- Too much focus on the technical side – rather than on people factors.

(Lengnick-Hall and Lengnick-Hall, 2006, Dery et al 2013, Marler and Fisher, 2013; Bondarouk et al, 2010, Parry and Tyson, 2011).

According to Aldamour and Shannak 2012:63)

about 60% of the variations of the implementation level of e-HRM can be explained by internal factors whereas about 40% of variations can be explained by external factors. The adopters and non-adopters of e-HRM were found different in terms of their internal and external environmental characteristics in many ways.

In addition, researchers attribute the failure of e-HRM adoption to poor understanding of the e-HRM implementation requirements, including inherent organisational rigidity, inertia and resistance to change (Lengnick-Hall & Lengnick-Hall, 2006; Waring, 2004 or, as Dery et al (2013) point out, e-HRM fell short of

generating the transformation of HR as promised, caused by the naïve approach to e-HRM within an organisation.

Other authors (e.g. Maier et al, 2013; Marler and Fisher, 2013; Bondarouk et al, 2009; Huang and Martin-Taylor, 2013) level the blame of e-HRM's low success rate in enhancing HR strategic aspiration to the people factor, skill limitation of the HR staff and to environmental and social factors. As Zisiadis (2015) rightly puts it, IT does not operate on its own as it is part of a relationship where human and environmental factors shape the operation and the outcomes of it.

The common thread and general understanding that emerges from the above debate is that whether e-HRM principles and attributes work or not depends on the existence of the right conditions. Different environments and different cultural settings require the use of different approaches to e-HRM. In many cases e-HRM contribution to HR activities has made a difference but it has disappointed on the strategic front. This view is echoed by Thite (2013:1) who stresses that:

While research indicates that information technology (IT) has indeed helped the HRM function to streamline and improve transactional HR activities and processes, particularly in large and complex organisations, it has had limited success in enabling it to become a strategic business partner (Parry & Tyson, 2011; Dery & Wailes, 2005)

In the same vein, Bondarouk, Harms, and Lepak, (2015:3) recognise that e-HRM has supported some HR activities but its impact remains confined to cost effectiveness and better efficiency. *‘Overall, the findings also show that the improvement in HRM services, enabled by e-HRM, is not clearly defined in practice, and that e-HRM is mostly directed at other targets such as cost reductions and efficiency increases.’*

This study argues that e-HRM adoption projects fail not because the new strategies or goals are not fit for purpose, but rather because organisations are not always ready and capable of successfully implementing them and there is a lack of effective decision-making from the management. It is widely acknowledged that the impact technology has had on human resource management (HRM) has been remarkable (Stone and Dulebohn, 2013) influencing the operational, relational and transformational HRM aspect.

3.22 Challenges of e-HRM in developing countries

The pace of e-HRM adoption in developing countries is not at the same rate as that of developed regions and countries. Although, there is increasing awareness and understanding of the importance and benefits of developing and adopting e-HRM, there are some tough challenges and barriers facing the implementation of e-HRM in developing countries. The literature on e-HRM is mainly western-oriented and has paid little attention to e-HRM in developing countries where it remains under-

researched. This is attributable to a number of factors, namely financial resources, lack of adequate IT infrastructure, poor maintenance culture, lack of technical know-how i.e. knowledge, skills, and abilities (KSAs) of users is limited. Moreover, there is lack of application for HR users (Beckers and Bsat, 2002), as well as lack of information technology support (Nel et al., 2008). According to Sylvester, Bamidele, and Oluyemi (2015:38):

Information/evidence based decision making is not yet a culture adopted in many organisations of developing countries. There is a shortage of personnel, equipment and financial resources that are essential for information collection, analysis, dissemination and use.

Similarly, in many developing countries, HR activities are still deeply rooted in traditional ways of doing business, submerged by paperwork and bureaucratic procedures. Iwu, Ukandu and Ile (2016:9) state that:

In Africa, E-HRM is fairly new. Because it is fairly new, its introduction and adoption in organisations are fraught with challenges. The universities, despite their status as the producer of critical skills, are perhaps the worst hit. This is attributable to a number of factors namely funding, management, and poor integration of users.

It can be argued, however, that the use of technology to enhance human performance is relatively new and not well understood for most organisations

(Cooper and Schindler, 2005), albeit there is a huge divide in the knowledge, skills, and abilities (KSAs) between users in developed and developing countries.

It can be optimistically observed that e-HRM in many developing countries is gaining in popularity. It is slow but it is work in progress. Some developing countries with the necessary resources and skilled human capital have made huge strides in catching up with the industrialised countries such as some East Asian countries like Malaysia, India, and Indonesia. Some GCC countries are also embracing IT in all aspects of life and the workplace. It is worth noting the widening of the research gap between the prolific western oriented research on e-HRM and the handful of studies conducted in developing countries.

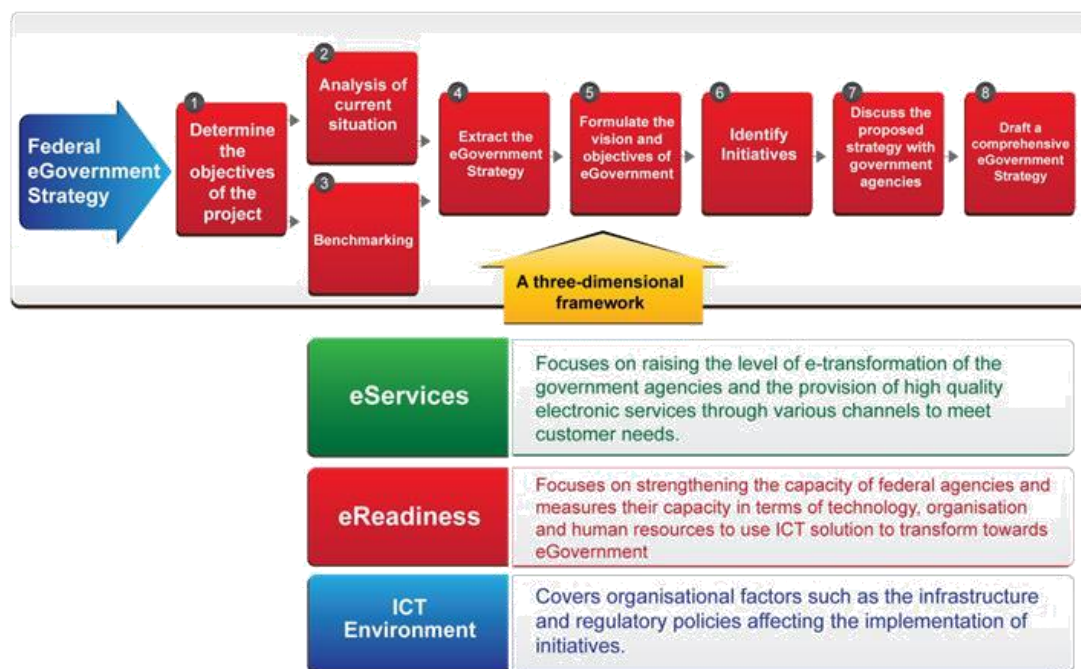
3.23 e-HRM in the UAE

The UAE landscape has been transformed over the last three decades. Changes at economic, political, technological and social levels have been faster than anyone ever imagined and the Emiratis have embraced change in a dynamic way. The UAE has always played a leading role in integrating innovative concepts and has adopted a proactive approach for continuous improvement in all sectors to create excellence in line with the UAE 2030 Vision. As the Ruler of Dubai, His Highness Sheikh Mohammed bin Rashid Al Maktoum stressed the importance of keeping up with scientific and knowledge development to enable Arab people, during the Arab Social Media Influencers Awards (ASMIA) ceremony, January 2017:

The profound changes the region has witnessed requires us to keep pace with the speed of global developments and changing knowledge trends. We need to intensify the work required to benefit from these breakthroughs and accelerate development in the region so that it can regain its position as a cradle of human civilisation.

The following figure highlights the eGovernment development approach taking into account three primary dimensions of eServices, eReadiness, and ICT environment:

Figure 3.10: Federal eGovernment Strategy



Source: Al-Khouri (2012)

As a result, the UAE has put the adoption and implementation of Information and Communication Technology (ICT) in all service delivery on top of its agenda. It has

allocated huge resources to generalise its use and practice across its government and private sectors. The Global Information Technology Report (2015-2016) indicates that the UAE leads the MENA region in networked readiness. It continues to improve with a clear upward trend in mean country performance, and is ranked 26 out of 143 countries. The e-Government programme is constantly improving as it is an important driver of the UAE government strategy and one the key enablers to achieve UAE Vision 2021. In addition, the official portal is open for users to access the different federal and local government e-Services. The portal acts as a communication facilitator between the customers and the government representatives. There are also e-Participation, e-Services, etc.

In terms of organisations, both in the public and private sectors, they have sought to find solutions to enhance and optimise the performance of their workforce. Thus, in the context of the UAE, an e-HRM system is viewed as more than a mere set of IT services to enhance HR activities. It is a substantive upgrading and improvement of the quality of life in the UAE.

In general, HRM and e-HRM is under-researched in the Middle-East. Budhwar and Mellahi (2007) point out that there has not been much research in the area of human resource management in the Middle-East region. There is little or no research involving e-HRM with the exception of a short paper published by Almanhali, Radaideh, and Shehabuddin (2006) entitled: '*e-HR: A Custom Electronic Human*'. The paper focuses on the Human Resources General Directorate (HRGD) of Abu Dhabi , GHQ. According to the authors the gist of the paper is '*First, to automate data acquisition, transfer and processing. Second, to*

integrate all departments and functions across HRGD into a single solution that can serve different departments' needs and requirements' (2006: Abstract). Almanhali, Radaideh, and Shehabuddin (2006:3-5) confirm that HRGD of Abu Dhabi , GHQ have introduced three e-HRM activities:

At the time of writing this paper, three of the e-HR sub-systems have been completely developed. These are the e-Recruitment, e-Training, and e-Education ones, which are being internally tested and will be released to public in the near future.

The e-Recruitment sub-system handles the entire recruiting cycle that can be summarised as follows:

- Concerned ADP departments post their staffing needs.*
- HR Planning department double checks these needs and approve/disapprove them.*
- Recruiting department advertises the approved jobs openings on the website.*
- Receiving applications from applicants for particular job openings.*
- Concerned ADP departments review and evaluate applications and shortlist candidates for each of their advertised jobs.*
- Recruiting department arranges for interviews, medical tests, appointments, etc.*

The e-Training sub-system enables the Training department to:

- Receive training requirements electronically from the different ADP departments.*

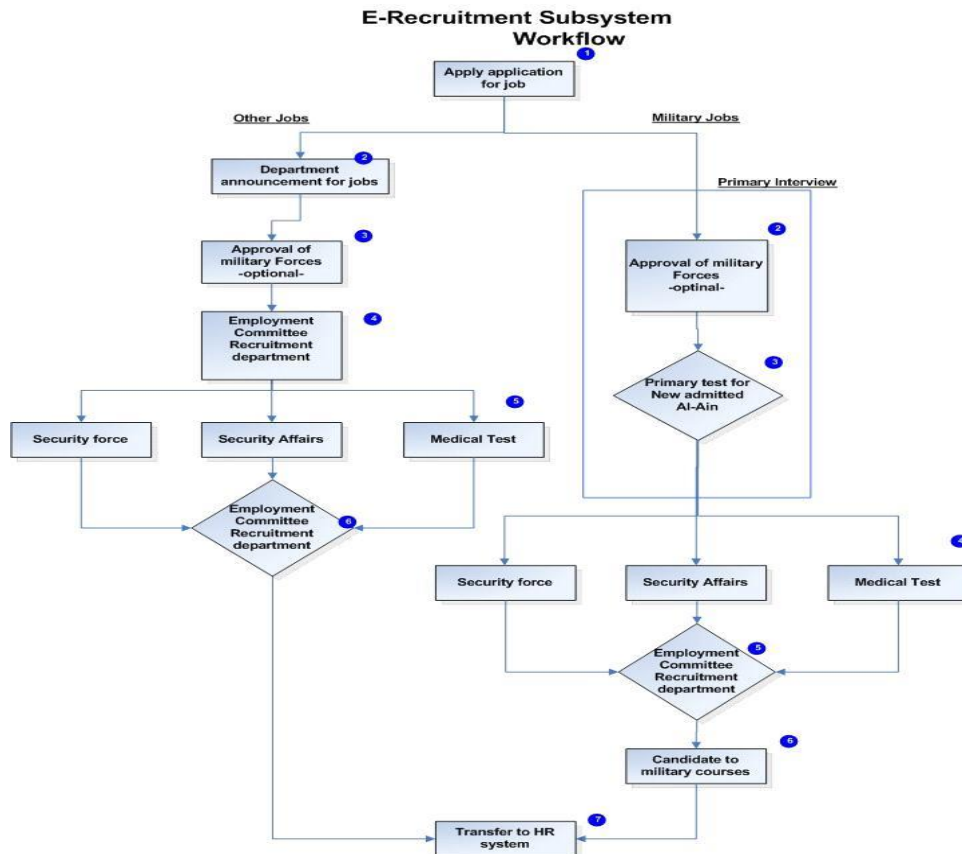
- *Receive the details of available training programs from internal and external training providers.*
- *Produce a training plan and communicate that with the concerned ADP departments as well as with the concerned training providers.*
- *Follow up on carrying on training programs.*

The e-Education sub-system enables the Education section of the Training department to maintain ongoing communications with ADP undergraduate and graduate students who are studying inside the country as well as with those who are studying abroad. Also, this facilitates communications with their universities. Overall, this sub-system helps the Education section to monitor all ADP sponsored students.

(Almanhali, Radaideh, and Shehabuddin
2006:5)

The following figure illustrates the e-Recruitment sub-system at ADP:

Figure 3.11: eRecruitment Subsystem at Abu Dhabi ,



Source: Almanhali, Radaideh and Shehabuddin. (2006)

Al-Raisi (2011) conducted a worthwhile study in which he investigated the introduction of e-Performance assessment systems in governmental organisations in the United Arab Emirates. The research evaluated the influence of cultural forces in accepting the implementation of technology systems focusing on e-Performance involving government employees. The findings revealed employee performance is subject to a range of influencing factors: organisational, cultural, and interpersonal behavioural characteristics. The findings suggest that performance management systems, particularly e-Performance management systems, are expected to close the gap in expectation between the organisation and the worker Al-Raisi (2011) Therefore it can be said that despite the huge

progress shown by the UAE regarding the adoption of IT in various sectors, e-HRM is literally still in its 'youth' stage.

3.24 Summary and gaps in the literature

The conclusion that can be drawn from the extensive e-HRM literature is that e-HRM comes with great expectations of changing and enhancing the way that HR performs its activities and fulfils its role. The assumption is that e-HRM will enable HR to achieve a strategic goal. As a result, substantial investments were made in introducing and integrating IT in HR to improve efficiency, service delivery, to ensure standardisation and enhance organisational image, to empower managers and transform HR from a conventional role to a more strategic function. Sceptics contend that e-HRM comes full of promises to enhance HR services and activities which in turn benefit both employees and management, improve efficiency and cost effectiveness within the HR department, and to some extent it has succeeded, but it has fallen short of taking HR to a higher level. In principle, it is assumed that e-HRM drives HR to become a strategic player in achieving organisational goals. To a point, e-HRM does just that which is it has enabled HR staff to become more efficient and better informed. It reduced the administrative burden for HR professionals. It has improved communication but has disappointed on the strategic front.

Despite the broad appeal and interest that e-HRM generates as a research area from both academics and practitioners, e-HRM is not mature yet; it does not have

yet a strong theoretical base. There is also a knowledge gap in terms of the applicability of the existing theoretical base in non-Western countries and in particular in the Arab world. Although there is a lot of interest about the perceived strategic benefits of the use of IT, the evidence to support this claim in terms of clear cut outcomes in many institutions that adopted e-HRM is not straightforward.

Although the literature has provided fresh insights and a rich foundation for a better grasp of e-HRM adoption, e-HRM usage, and e-HRM benefits and outcomes, e-HRM remains more theory-driven and evidence-based e-HRM studies lack practical implications or have not been tested.

The definitions of e-HRM are similar in form and content - very few of them provide innovative insights. The literature debate appears to be fragmented and at times rather repetitive, showing the same outcome with overlapping views, with few ground breaking ideas. Both HR academics and professionals HR literature indulge in the use of terms often used randomly or interchangeably to explain the integration of technology in human resources management. For instance, some authors use terms such as e-HR, e-HRM, HR intranet, HR portals and self-service. These are widely used in contrast to terms such as web-based HR(M) and Business-to-Employee (B2E), which are less common but equally valid. Older definitions, still used by many organisations and some academics, include the terms 'HRIS' (Human Resources Information Systems) and 'HRMS' (Human

Resource Management Systems) (Foster 2009). If taken to its extreme, it might be concluded that e-HRM consists of any form of technology that supports the delivery of HR services (Lengnick-Hall & Moritz, 2003).

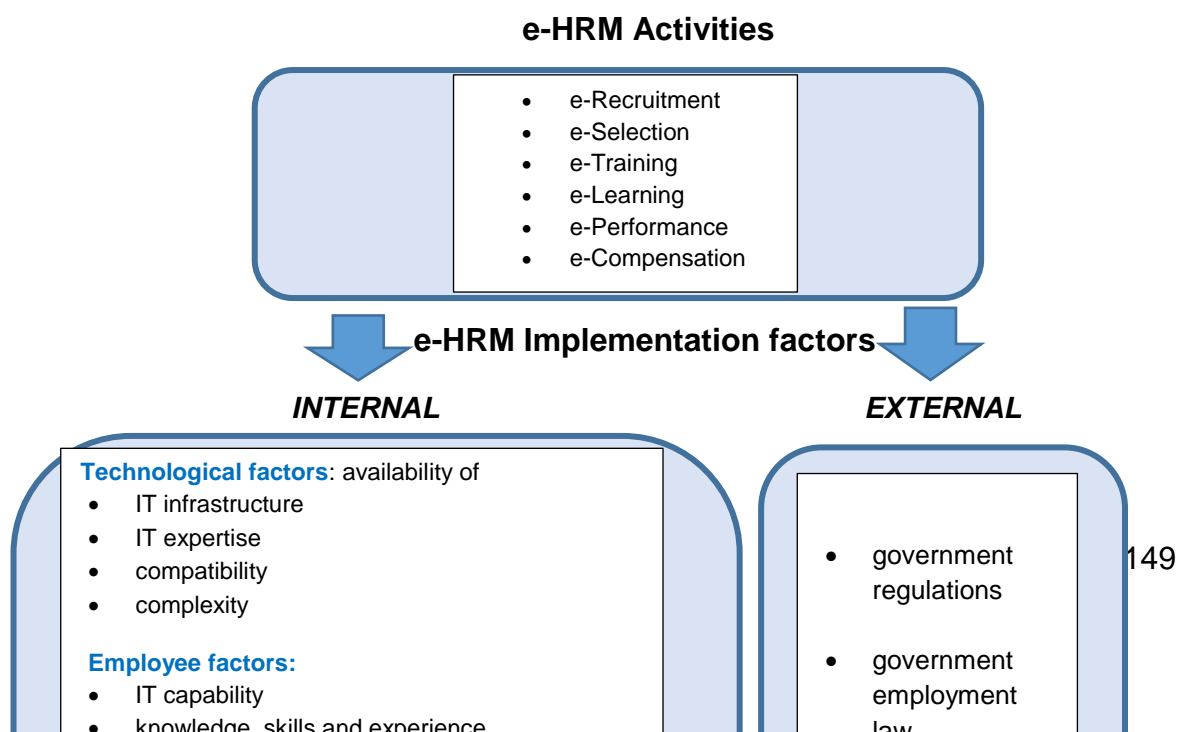
Overall, the proliferation of studies on e-HRM clearly suggests that this research area is booming. Nevertheless, the scope of e-HRM research is dominated by specifically focusing on the type of e-HRM activities, their applications, the advantages and disadvantages of e-HRM, the success factors for the development and the conditions that support successful e-HRM adoption. Despite extensive research that has been conducted on e-HRM, there are still no conclusive answers, and several questions remain unanswered but the debate is far from superfluous. Even today, new directions and avenues are still being explored. However, the majority of these studies are set in advanced countries such as the USA and European countries (Panayotopoulos et al., 2007) which have a long tradition of continuous HR improvement, periodic organisational change and clear regulatory framework. In contrast, e-HRM remains under-researched in developing countries.

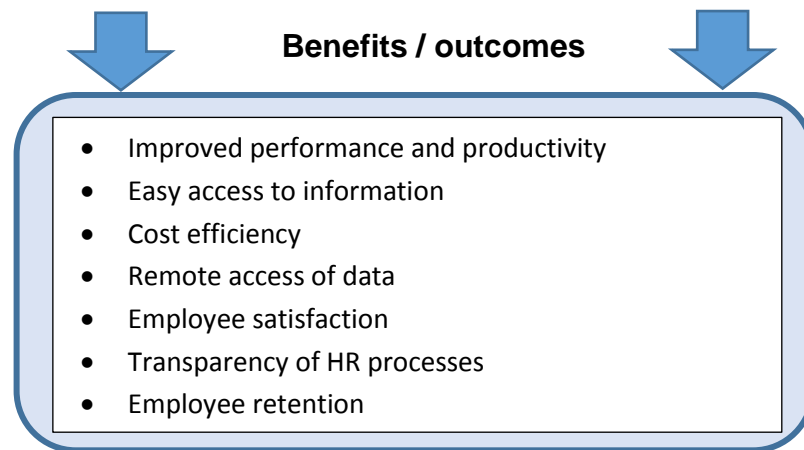
3.25 Conceptual framework

The following conceptual framework is a synthesis of the theoretical knowledge which was informed by the literature. It links e-HRM activities to the key influencing factors for e-HRM adoption, which, in turn provide solutions and positive outcomes

resulting from the adoption of e-HRM for the organisation with the aim of reducing costs, enhancing communication, saving time and expenses to fulfil human resources management functions. The influencing factors, both internal and external, could have an effect on the strategic goal of the organisation and the implementation of e-HRM. The conceptual framework fills a knowledge gap by synthesising the literature findings related to e-HRM.

Figure 3 12: Conceptual Framework: Influencing e-HRM Implementation Factors





Source: Designed by the present researcher

CHAPTER FOUR

RESEARCH METHODOLOGY AND METHODS

4.1 Introduction

This chapter discusses the research methodology and methods used to achieve the objectives of this study. This study aims to examine the importance and benefits of implementing e-HRM at Abu Dhabi , department (ADPD) in the UAE in line with the research objectives of this study. It analyses and assesses the enablers and challenges of implementing electronic human resource management (e-HRM) systems within ADPD. This chapter starts by highlighting the philosophical assumptions underpinning this study based on appropriate research methodology literature. In addition, this chapter justifies the choice of the methods employed in this study. In other words, it explains why a particular method was chosen, how the data will be collected, and how it will be analysed. It also discusses the choice and use of particular tools and strategies for data collection and analysis.

This chapter will consider the type and size of sampling and validity and reliability of the methods of analysis employed to address the aim and objectives of the research. This chapter consists of the following:

- Re-stating the research questions and objectives
- Importance of research
- The importance of methodological assumptions in research
- Difference between methodology and methods
- Research philosophy
- Justification of the selected philosophy for this study
- Research approach
- Qualitative vs. quantitative research approaches
- Research strategy
- Research design
- Sampling population, size
- Methods
- Ethical considerations
- Summary

4.2 Re-stating the research objectives and research questions

The aim of recapping the research objectives and research questions is to demonstrate how the methodology and methods selected are suitable for achieving the broad aim of this study. The following research objectives have been set by this research.

4.2.1 Research Objectives

The main objectives of this research can be summarised as follows:

1. To analyse the current problems and challenges impeding the implementation of e-HRM at AD , Dept.
2. To examine the benefits and success factors for implementing e-HRM in Abu Dhabi , Department.
3. To explore the views and perceptions of ADPD's management on the drivers, barriers and enablers to e-HRM
4. To determine whether western e-HRM models can be implemented in UAE settings in particular within ADPD
5. To make recommendations based on the findings of this study on how to improve the provision and future development of e-HRM devoted to ADPD.

4.2.2 Research Questions

In order to achieve the objectives, this study addresses the following questions:

The main question is: *What are the benefits of implementing e-HRM at Abu Dhabi , Department?*

There are also specific research questions:

- a) What are the current problems and challenges impeding the implementation of e-HRM in the AD , Department?
- b) Can western e-HRM models be implemented in UAE settings, in particular ADPD?
- c) What are the perceptions and perspectives of managers and employees regarding the drivers of e-HRM implementation?

4.3 The importance of research

Research is a term which means different things to different people. Everyone seems to attach a specific meaning to it to suit their own purpose. As a result, there is a wide range of definitions. This view is supported by Menacere (2016: 12) who points out that: *Although research is crucial to both business and academic enterprise, there is little consensus in the literature on how it should be defined; it means different things to different stakeholders.* Some believe that, the aim of research is to find a solution to a problem or answer a question. Sekaran (2003:03) defines it as *“the process of finding solutions to a problem after a thorough study and analysis of the situational factors”*. As for Saunders et al. (2009) research is a process that is undertaken to increase knowledge by gathering data in a systematic way. Kumar (2014:381) defines research as *“One of the ways of finding answers to your professional and practice questions. It is characterised by the use of tested procedures and methods and an unbiased and objective attitude in the process of exploration”*. According to Ghauri, et al, (1995:13) research is also related to finding, selecting, structuring and solving problems. They argue that *“research is often thought of as a process; i.e. a set of interrelated activities unfolding over time”*

Similarly, Bryman (2004) views research as a systematic approach from which a researcher is able to identify the issues that need addressing and decide on the objectives and finally draw conclusions on the basis of the data and its analysis

For the purpose of this study, research is viewed as an investigation which consists of generating, seeking new information, testing or challenging existing ideas. It is the systematic collection, analysis and interpretation of data to generate new knowledge and answer a question or solve a problem. The overall aim of research is to generate information and knowledge that is useful and beneficial. In brief, the purpose of conducting research is the pursuit of knowledge and the search for the truth using systematic methods and applying scientific procedures and scientific methods of inquiry in reaching conclusions.

In conclusion, there is agreement between scholars that 'research' uses appropriate methods for data collection and analysis; it is systematic and it addresses a specific issue or problem (research problem) (Hussey and Hussey, 1997). Kumar (2014) stresses that the definition of research varies from discipline to discipline and expert to expert. This difference in the definition and understanding of research can be attributed to the different philosophies that underpin research thinking. According to Kumar (2014), a person's belief in a particular philosophy underpinning the mode of enquiry shapes their opinion about the appropriateness of the methods for finding answers to their research questions.

4.4 The importance of understanding methodological assumptions in research

Methodology is the force that drives research and the basis of any project. All forms of knowledge are centred on methodology. Methodology enables the creation and development of knowledge. Consequently, research is built upon assumptions which drive the research forward. The term ‘assumptions’ refers to the underlying beliefs, commitments and values that determine and shape the methodology of a particular theory. Jennings et al (2005:145) argue that, “*Either explicitly or implicitly, researchers base their work on a series of philosophical assumptions regarding ontology, epistemology, and human nature, which have methodological consequences*” Thus methodology is crucial to research as Menacere (2016:12) argues ‘*It sets the directions of the research and the possible implications of the research. The methodology is also shaped by the literature review. To be fit for purpose, research findings must be founded on a clear methodological framework in order to be readily translatable into action.*’

4.5 Distinguishing between methodology and methods

The terms ‘methodology’ and ‘methods’ are often confused or used either randomly or interchangeably by some researchers. Clearly, they are not quite the same. Saunders et al. (2009) state that sometimes, confusion exists in the interpretation of the two terms ‘*research methodology*’ and ‘*research methods*’ due to numerous authors’ frequent use of them randomly. According to Payne

and Payne (2004: 148), methods are the “*specific techniques*” used to collect and analyse data within a research project whereas methodology indicates “*the sets of conceptual and philosophical assumptions that justify the use of particular methods*”. In contrast, Hallebone and Priest (2009: 187) consider methodology as “*a set of tactics and supporting steps that operationalise the chosen science and logic of inquiry*”, while they describe methods as “*the procedures, tools, techniques and associated skills... that are needed to perform the specific tasks required by the methodology*”. Neuman (2011: 2) argues that while methods “*refer to the collection of specific techniques we use in a study*”, methodology is “*broader and envelops methods. Methodology means understanding the entire research*”. As Dawson (2009) indicates, methodology is the philosophy which guides the research. Similarly, Easterby-Smith et al (2012:18) distinguish methodology and methods as follows: “*methodology is a combination of techniques used to inquire into a specific situation while methods are individual techniques for data collection, analysis, etc.*” Similarly, Riazi and Candlin (2014: 136) believe that methodology is “*the concept and framework that helps researchers to design their study*” while methods refers “*to the use of specific techniques and tools and/or particular procedures in undertaking the research study in question.*”

Thus, to conclude, the terms methodology and methods are different. Hussey and Hussey (1997: 54) suggest methodology is “*the overall approach to the research process, from the theoretical underpinning to the collection and*

analysis of data.' Saunders et al (2009) considers methodology as a theory of (1) how research should be conducted and (2) the implications of the method(s) used by the researcher, given the assumptions on which the research is based.

As has can be seen, there is a plethora of methodology and methods definitions, but these are often overlapping. In short, a research methodology is a systematic scientific plan on how research should be conducted whereas methods are simply data collection instruments such as surveys or interviews. The methodology selected in this research is based on the nature of the problem and the research questions.

4.6 The relevance of research philosophies

There is a consensus in the research methodology and methods textbooks that research philosophies are the enablers that guide the researcher on how to conduct the research, but they can also help to identify the type of data required, and how to collect and interpret these data in order to find answers to the research questions and achieve the objectives. Researchers need to understand philosophical assumptions before undertaking a particular research project. Easterby-Smith, et al. (2002), suggest three reasons why researchers need to have a good awareness of research philosophies.

- They can help to clarify the research designs by highlighting what kind of evidence is needed and how it should be gathered and interpreted, and how

this will provide good answers to the basic questions which are being investigated.

- A knowledge of philosophy can help the researcher recognise which design will work and which will not.
- It can also help the researcher identify and even create designs that may be outside his or her past experience.

The methodology and methods literature use variable terms depending who the author is, such as '*philosophy, paradigm*' and '*worldview, assumptions*.' Burton et al. (2014) use the term '*paradigm*' interchangeably with the term '*research philosophy*' and point out that paradigms represent worldviews. Likewise, Hartas (2010) views paradigm as a 'worldview'. Hallebone and Priest (2009) argue that paradigm embodies a philosophy of science and logic of inquiry. Gliner and Morgan (2000:17) suggest that a "*paradigm is a way of thinking about conducting a research. It is not strictly a methodology, but more of a philosophy that guides how the research is to be conducted*".

Punch (2006: 31) views paradigm as "*a set of assumptions about the social world, and about what constitutes proper techniques and topics for inquiring into that world*". A research paradigm is a perspective that is based on a set of shared assumptions, values, concepts and practices (Johnson and Christensen, 2010). Cohen et al. (2000) views the research paradigm as a precise procedure that involves various steps by which a researcher creates a relationship between the research objectives and questions.

In the research methods and methodology textbooks, these terms '*philosophy*,' '*paradigm*,' '*worldview*,' '*assumptions*' are employed inconsistently, often interchangeably and sometimes indiscriminately. In fact, they all have similarities in meaning; however, the worldview includes philosophy and paradigm because it is a much broader term. Research paradigm and philosophy form a significant part of research methodology in order to collect data in an effective and suitable manner (Williams, 2011). A number of studies (Saunders et al., 2009 and Ritchie and Lewis, 2003) have used different descriptions, categorisations and classifications of research paradigms and philosophies in relation to research methods with overlapping emphasis and meanings. The term paradigm is used interchangeably with the term research philosophy throughout the study. According to Menacere (2016:13) there is inconsistency in the use of methodological terminology:

Research philosophy, research paradigm and worldview are usually put under the same umbrella, suggesting these are just different labels signifying the same thing. Moreover, philosophy, paradigm, worldview, ontology and epistemology are presented as purely theoretical abstractions of complex intellectual interest but detached from the real world.

Ontology and epistemology are two key ways of thinking about research philosophy. According to Saunders et al. (2009), each one of these ways of thinking about research philosophies causes important differences, influencing the way of thinking according to the research process. Flowers (2009) argues that these two parameters describe the nature of reality and truth, perceptions, beliefs

and assumptions and can influence the way the research is undertaken, from the way it is designed to the conclusion. Therefore, the research has to take into consideration these two supporting assumptions: ontology and epistemology.

4.7 Ontology and epistemology

According to Gill and Johnson (2010) ontology and epistemology are philosophical terms that originated from two Greek words each; ontology consists of 'ontos' which refers to 'being' and 'logos' which refers to 'theory' or 'knowledge', and epistemology is a combination of the Greek words 'episteme' which means 'knowledge' or 'science' and 'logos' which means 'theory', 'knowledge' or 'information'. How reality is perceived and how best it can be understood and interpreted constitutes the essence of research.

Schraw (2013) points out that there are no universally shared definitions of ontology and epistemology; however, epistemology is often associated with the study of the nature of knowledge, how knowledge is gained from social entities: *'Knowing and how knowledge is generated'* (Haworth 1984:344). Similarly, Clark et al., (2008) think that epistemology is the area of philosophy that uncovers the answer to the question *'What does it mean to know?'* or *'How does a researcher acquire the sought after knowledge?'* Furthermore Crotty (1998:8) agrees with the

above view and argues that *“epistemology is a way of understanding and explaining how we know what we know”*.

Maynard (1994:10) suggests that: *‘Epistemology is concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate.’* Oliver (2010: 34-35) defines ontology as *“the study of what we assume to exist in the world”*, and epistemology as *“the study of the grounds upon which we believe something to be true”*. According to Neuman (2011), ontology is an area of philosophy that deals with what exists and asks what the fundamental categories of reality are, while epistemology is an area of philosophy that is concerned with the creation of knowledge and focuses on how we know what we know and how we can reach truth. Reality from the positivist perspective is objective, rational and independent from the observer, whereas from the interpretivist perspective, reality is multi-dimensional, ever changing and dependent on different frames of reference (Burton et al., 2014).

According to Saunders et al. (2009), ontology includes two aspects: objectivism and subjectivism. Objectivism views the social entities as positioned externally from the social actors whereas, for subjectivism, the reality of social phenomena is created by the perceptions and actions of the social actors as it exists in individuals’ consciousness.

Different schools in the social sciences distinguished between two main views on the nature of knowledge: the positivistic or the deductive approach and interpretivist (sometimes called phenomenology) or the inductive approach, (Collis and Hussey, 2003). Guba and Lincoln (1994) address various research paradigms named as: positivism, post positivism, critical theory, and constructivism and their implications for research and illustrate their positions with respect to three fundamental questions, which are interconnected in such a way that the answer given to any one question, taken in any order, constrains how the others may be answered. One is the ontological question (what is the form and nature of reality), the other is the epistemological question (what is the nature of the relationship between the knower and what can be known), and the last is the methodological question (how can the inquirer go about finding out whatever they believe can be known).

The following table illustrates the philosophical assumptions:

Table 4.1: Relationship between epistemology and ontology

Assumption	Questions	Quantitative	Qualitative
Ontological	What is the nature of reality?	Reality is objective and singular, apart from the researcher	Reality is subjective and multiple as seen by participants in a study
Epistemological	What is the relationship of the researcher to that researched?	Researcher is independent from that being researched	Researcher interacts with that being researched
Axiological	What is the role of values?	Value-free and unbiased	Value-laden and biased
Methodological	What is the process of research?	Deductive process Cause and effect Static design-categories isolated before study Context-free Generalisations leading to prediction, explanation and understanding Accurate and reliable through validity and reliability	Inductive process Mutual simultaneous shaping of factors Context-bound Emerging design-categories identified during research process Patterns, theories developed for understanding Accurate and reliable through verification

Source: Collis and Hussey (2009:58)

Guba and Lincoln (1994) point out that both qualitative and quantitative methods may be used appropriately with any research paradigm. (Saunders et al, 2007). It is worth noting that research philosophy which is selected by the researcher holds important assumptions about the way the practical world is perceived. Some researchers (e.g. Saunders et al, 2007; Collins and Hussey, 2003; Cassell and Symon, 1994) argue that the assumption behind the positivist approach is determined by objectives that are external to social constructs which can be revealed through the scientific method where the focus is in measuring relationships among variables systematically. In this context, Saunders et al (2007)

indicate that the emphasis of the positivist researcher will be on quantifiable observations that lend themselves to statistical analysis. Thus, this paradigm is described as a quantitative method, (Saunders et al 2007; Jankowicz, 2000; Collis and Hussey, 2003).

In contrast, the assumption behind the interpretivist paradigm or the inductive approach is socially constructed and subject to alterations depending on time and the environment under consideration, (Collis and Hussey, 2003). Saunders et al (2007:107) state that *“The phenomenology refers to the way in which we as humans make sense of the world around us”*. Furthermore, phenomenology expects an individual to engage with phenomena in his/her world and make sense of them directly and immediately (Crotty, 1988). According to Collis and Hussey (2003) the phenomenological approach considers that social reality is dependent on the researchers' inner mind and feelings. In other words, a researcher will not be independent of what is being researched. The researcher, therefore, will be part of the research. In addition, phenomenology does not see the world as consisting of an objective reality in the same way as positivist does. The emphasis will be on the primacy of subjective consciousness (Remenyi and Williams 1998). This paradigm is defined as a descriptive and interpretive method and is also a qualitative method focusing on the subjective aspects of human activity by concentrating on the meaning rather than the measurement of social phenomena. Table 4.2 shows the difference between the two methodologies. According to Collis and Hussey (2003) the positivism paradigm is quantitative, objectivist, scientific

and experimentalist, and the phenomenological paradigm is qualitative, subjectivist, humanistic and interpretive.

Table 4.2: Differences between two main paradigms

Positivism Paradigm	Phenomenology/ Interpretivism Paradigm
Tend to produce quantitative data	Tend to produce qualitative data
Use large sample	Uses small sample
Concerned with hypothesis testing	Concerned with generating theories
Data is highly specific and precise	Data is rich and subjective
The location is artificial	The location is natural
Reliability is high	Reliability is low
Validity is low	Validity is high
Generalises from sample to population	Generalises from one setting to another

Source: Hussey and Hussey (1997)

In conclusion, ontology is considered as the reality that the researcher investigates whilst epistemology is the relationship between that reality and the researcher. Reality is objective, absolute and the truth is single vs realities. As social constructs

are plural and reliant on subjective interests, researchers generally need to determine their position.

4.8 Research Philosophies

Depending on who the author is, research philosophy appears in the literature under different terms, such as '*research paradigm, epistemology and ontology, and philosophical worldviews*' (Creswell, 2009). Research is often multi-purpose and often very few studies sit comfortably within a wholly quantitative or qualitative. In most cases, the philosophical background of a research is woven by a combination of different paradigms (Saunders et al., 2007). According to Grix (2004: 78) paradigm is "*our understanding of what one can know about something and how one can gather knowledge about it, and inherent in every single approach to the study of society*". Kumar (2005) states that there are two main paradigms that form the bases of research in social sciences - positivism and interpretivism. He suggests that the paradigm which is rooted in physical science is known as the systematic, scientific or positivist approach. The other paradigm is called the qualitative or interpretivist approach. A paradigm in simple terms is a set of assumptions about how the world can be known (Gilbert, 2008). The following table summarises some of the most common features that distinguish between positivism and interpretivism.

Table 4.3: The characteristics of Positivism and Interpretivism

Meta theoretical assumptions about:	Positivism	Interpretivism
Ontology	Person (researcher) and reality are separate	Person (researcher and reality are inseparable (life-world)
Epistemology	Objective reality exists beyond the human mind	Knowledge of the world is intentionally constituted through a person's lived experience.
Research Object	Research object has inherent qualities that exist independently of the researcher.	Research object is interpreted in light of meaning structure of person's (researcher's) lived experience.
Method	Statistics, content analysis	Hermeneutics, phenomenology, etc.
Theory of Truth	Correspondence theory of truth: one-to-one mapping between research statements and reality.	Truth as intentional fulfilment: interpretations of research object match lived experience of object.
Validity	Certainty: data truly measures reality.	Defensible knowledge claims.
Reliability	Replicability: research results can be reproduced	Interpretive awareness: researchers recognise and address implications of their subjectivity.

Source: Weber (2004:232)

4.8.1 Positivism

Positivism and Interpretivism are the two the most widely referred to, research philosophies in the social sciences (Collis and Hussey, 2009; Easterby-Smith et al., 2002). Taylor and Bogdan (1984) argue that there are two major research paradigms which have dominated the social sciences: the positivist seeks to obtain

knowledge based on facts or identify causes of social phenomena independent from the subjective states of individuals; the second paradigm is described as phenomenology also called as interpretivism, and aims to gain knowledge based on words and understanding of social phenomena from the actor's/participant's own perspectives and perceptions.

According to Saunders et al. (2003) a positivist philosophy is based upon the highly structured methodology to enable generalisation and quantifiable observations and to evaluate the results with the help of statistical methods. It is commonly used in natural science as a philosophy of unchanging, universal law and the view of everything that occurs in nature (Saunders et al., 2003). The positivist belief is based on natural sciences and is characterised by the testing of hypotheses developed from existing theory (hence deductive or theory testing) through measurement of observable social realities. Positivism presumes that the social world exists objectively and externally, that knowledge is valid only if it is based on observations of this external reality and that universal or general laws exist or that theoretical models can be developed that are generalisable, can explain cause and effect relationships, and which lend themselves to predicting outcomes.

Positivism enables the researcher to observe reality in a natural social setting, making generalised conclusions and using pre-existing theories to develop a different hypothesis. Positivists believe that there can be no real knowledge except

that which is based on observed facts (Bryman, 2001). Gilbert (1993) concurs and argues that positivists deem that society can be explained 'scientifically' according to laws and rational logics. Thus, the positivist belief is founded on values of reason, truth and validity by focusing purely on facts, gathered through direct observation and experience and measured empirically using quantitative methods surveys and experiments and statistical analysis (Blaikie, 1993; Saunders et al., 2007; Eriksson and Kovalainen, 2008; Easterby Smith et al. 2008; Hatch and Cunliffe, 2006). Hatch and Cunliffe (2006) relate this to the organisational context, stating that positivists assume that to find out what truly occurs in organisations can only be revealed through categorisation and scientific measurement of the behaviour of people and systems and that language is truly representative of the reality. Research that uses the positivist approach is interested in finding the facts or causes of a social phenomenon while disregarding the subjective state of the individual. Social and natural worlds are both regarded by positivists as being bound by certain fixed laws in a sequence of causes and effects (Collis and Hussey, 2003).

4.8.2 Positivism in the context of e-HRM

The predominant philosophical underpinning for e-HRM, the topic under consideration is positivism. The rationale for selecting predominantly a positivist stance is firstly, because it is closely related to the purpose of the study, the nature of the problem and research questions. Secondly, the majority of studies on e-

HRM have sought to obtain data based on numerical evidence. Researchers felt that positivism suited the purpose and nature of e-HRM. Positivism involves the use of hypotheses, large surveys, numerical and quantitative data, and the verification of theories (Thorpe, 2013). Thirdly, in the context of e-HRM as a research area, positivism can be said to be useful as it has a wide sample size and greater validity and is more representative of society than information gathered through other research methods.

4.8.3 Criticisms of positivism

Plenty of criticism has been levelled at positivism recently, despite the fact that it is widely used in research. As a result, many researchers have started to distance themselves from it and begun to seek alternative underpinning assumptions of knowledge generation. The key contentious argument against positivism stems from the belief that positivism claims objectivity and accuracy which today are challenged. An element of scepticism appears in the research where absolute objectivity is deemed unattainable and researchers should be prepared to deal with an imperfect and complex world. As a result, positivism has been facing some criticism as it is difficult to treat people as being separate from the social contexts in which they live and work and they cannot be understood or investigated without taking into account their perceptions which are influenced by their work place or environment. Furthermore, researchers are not value free; they bring their own interests and values to the research during the observation process as Strauss and Corbin (1998: 43) indicate:

Fortunately, over the years, researchers have learned that a state of complete objectivity is impossible and that in every piece of research – quantitative or qualitative – there is an element of subjectivity.... and researchers should take appropriate measures to minimise its intrusion into their analyses.

Collis and Hussey (2009: 56) echo the same thought and point out a number of criticisms of positivism which include:

- *It is impossible to separate people from the social context in which they exist*
- *People cannot be understood without examining the perceptions they have of their own activities*
- *Capturing complex phenomena in a single measure is misleading.*

In essence, positivism is based on the belief that everything can be measured and that the researcher is an outsider and detached from the study. However, often collecting statistics is only part of the answer to understanding meanings, beliefs and experience, which are better understood through qualitative data.

4.8.4 Interpretivism

Interpretivism emerged in response to the dominance and the limitations that appeared in the use of positivism. Easterby-Smith et al. (2012) call this philosophy ‘social constructionism’, where the focus is on the ways that people make sense of the world and determine reality through sharing their experiences using language. The interpretivist paradigm is concerned with what things mean, rather than with identifying and measuring phenomena. It is particularly interested in the idea that

human experience is a valuable source of data, as opposed to the idea that true research or discovery lies in simply measuring the existence of physical phenomena (Easterby-Smith et al. 2008). Saunders (2012) argues that in interpretivism, researchers attempt to understand the subjective and socially constructed meanings of what they study and also they interpret the social roles of others according to their own understanding. For Jankowicz (2005: 387), the assumption of interpretivism is that *“knowledge is the result of people’s attempts to make sense of what’s going on around them”*. According to Hallebone and Priest (2009), interpretivism involves an insider perspective on social phenomena. Thus in order to distinguish humans from the natural order, the use of instruments like interviews and observation is required. According to Bryman (2012: 30) interpretivism is:

A term that usually denotes an alternative to the positivist orthodoxy that has held sway for decades. It is predicated upon the view that a strategy is required that respects the differences between people and the objects of the natural sciences and, therefore, requires the social scientist to grasp the subjective meaning of social action.

The data obtained as part of an interpretivist study is generally qualitative as it is generated and interpreted. The essence of this philosophy is: knowledge is viewed as cultural and has many forms, which makes it subjective; data are regarded as dependent on the relationship between the researcher and the respondent and they are not put in pre-defined categories; the scientific methods are considered as

social constructs and research is not restricted to a set of scientific rules but rather it follows what researchers do (Guthrie, 2010).

Saunders (2012) highlights a number of differences between positivism and interpretivism: in positivism, the researcher's view of the nature of reality is external, objective and independent of social actors, while reality is socially constructed, subjective and may change in interpretivism; regarding what constitutes acceptable knowledge, positivists believe that only observable phenomena can provide credible data and facts whereas interpretivists accept subjective meanings and social phenomena; in positivism, highly structured data collection techniques are most often used with large samples and quantitative measurements while in interpretivism, qualitative data collection techniques are concerned with in-depth investigations with small samples. Saunders et al. (2007:74) summarise the advantages and disadvantages of positivism and interpretivism:

Table 4.4 Advantages and disadvantages of Positivism and Interpretivism

	Positivism	Interpretivism
Advantages	<ul style="list-style-type: none"> - Economical collection of large amount of data. - Clear theoretical focus for the research at the outset. - Greater opportunity for researcher to retain control of research process. - Easily comparable data 	<ul style="list-style-type: none"> - Facilitates understanding of how and why. - Enables a researcher to be alive to changes which occur during the research process. - Good at understanding social processes.

Disadvantages	<ul style="list-style-type: none"> - Inflexible-direction often cannot be changed once data collection has started. - Weak at understanding social process. - Often does not discover the meaning people attach to social phenomena 	<ul style="list-style-type: none"> - Data collection can be time consuming. - Data analysis is difficult. - Researcher has to live with the uncertainty. - Patterns may not emerge. - Generally perceived as less credible by non-researchers.
---------------	--	---

Source: Saunders et al. (2007:74)

Elsewhere, other researchers have debated at length the strengths and weaknesses of positivism and interpretivism. However, this neat and tidy classification and pigeonholing of positivism and interpretivism with a clear boundary has been challenged by recent research arguing that a clear-cut boundary is difficult to pin down. Research is often multi-purpose so one paradigm or approach does not automatically fit for a particular study. What fits in one case or one research setting may well be alien in another.

Table 4.5: Strengths and weaknesses of positivism and interpretivism

Philosophies	Strengths	Weaknesses
Positivism	1-May provide broad coverage of the range of a situation. Can be economical and fast. 2-Where statistics are aggregated from large samples, they can be of considerable relevance to policy decisions.	1-Methods employed tend to be rather artificial and inflexible. 2-Not very effective for understanding processes or the significance that people attach to actions. 3-Not very helpful in generating theories. 4-In having a focus on what is, or what has been recently, positivist approaches make it hard for policy makers to infer what actions and changes ought to take place in the future.
Interpretivism	1-Data-gathering methods seen as natural rather than artificial. 2-Ability to understand people's meaning. 3-Ability to adjust to new issues and ideas as they emerge. 4-Contribute to theory generation.	1-Collection can be tedious and require more resources. 2-Analysis and interpretation of data may be more difficult. 3-Harder to control the pace, progress and end-points of research process. 4-Policy makers may give low credibility to results emerging from qualitative approach.

Source: Amaratunga et al., (2002: 20)

4.8.5 Justification of the research philosophy for this study

The jury is still out regarding the most suitable research methodology and methods to adopt in research. As Easterby-Smith et al, (2002) clearly confirm, establishing the most suitable philosophy is still a source of debate among researchers. In selecting the philosophical underpinning of a particular study, Guba (1981: 76) states that *'it is proper to select a paradigm whose assumptions are best met by*

the phenomenon being investigated.' In support of the above view, Menacere (2016:20) argues should not be sought and adopted blindly.

Methodology is not an end in itself and the process of selecting a research methodology should neither be ruled nor decided by a paradigm influence. Selecting a specific methodology should be based on its fitness to answer the research questions, a choice determined and decided by the researcher's epistemological and ontological assumptions.

In the same vein Jankowicz (2000) and Robson (2002) emphasise that there is no straightforward rule which compels the researcher to select one method for one investigation and another for another investigation. For Bryman (2008: 15):

The clash [between positivism and Interpretivism] reflects a division between an emphasis on the explanation of human behaviour that is the chief ingredient of the positivist approach to the social sciences and the understanding of human behaviour.

It is this aim to understand social action from the perspective of social actors that separates interpretivism from positivism. Therefore, knowing the strengths and weaknesses of both paradigms provides the researchers with insightful aspects to their research positions. Thus the philosophical paradigm underpinning this study is mainly positivist because this study aims to find out the answer to the issue of implementing e-HRM systems and their impacts on ADPD HR performance, through an inquiry in order to obtain numerical evidence. The aim of this research

is to understand the perspectives of the participants about the success factors of implementing e-HRM and the potential challenges and barriers, etc. The rationale for selecting both positivism and interpretivism is closely related to the purpose of the study, the nature of the problem and the research questions set by this study. In fact some researchers believe that positivist and interpretivist research can complement each other, for example Neergaard and Ulhoi (2007: 5), who point out that it makes sense to:

embrace the scope and richness of qualitative research while at the same time acknowledging the qualities of the more established, traditional or well-accepted approaches, both qualitative and quantitative. Various forms of quantitative approaches are indeed useful when there is a need to provide generalisable representative description as well as statistical analyses.

This study argues positivism and Interpretivism are not fundamentally incompatible; there is a need to understand the assumptions behind each of them in making an informed decision about thoughtfully selecting a methodology and methods which actually serve the topic under consideration. Philosophies are neither better nor worse than each other, but they are better in terms of suitability for research questions (Saunders et al. 2009). Each research philosophy is better at doing different things and, therefore, a researcher should select the right one which allows them to answer the research questions and achieve the research objectives of the study. As always, which is 'better' depends on the research

questions the researcher is trying to answer. Saunders et al. (2007: 116) rightly argue:

It would be easy to fall into the trap of thinking that one research approach is 'better' than another. This would miss the point. They are 'better' at doing different things." Of course, the practical reality is that research rarely falls into only one philosophical domain...Business and management research is often a mixture between positivist and interpretivist.

4.9 Beyond Positivism and Interpretivism

It is worth noting that there exist alternatives beyond the widely used paradigms of positivism and interpretivism. The following discusses succinctly the diversity of philosophies which are much richer and more multifaceted, and very much deeper in their implications, than could be conveyed by any of the traditionally referred to paradigms. The different types of philosophies which are stated in respective literature are realism, constructionism and pragmatism. They build the frame for further strategy approaches and decisions.

4.9.1 Realism

Realism is the view that objects have an existence independent of the knower (Cohen et al., 2011). The epistemological researcher of realism considers results of science as accurate, true, and faithful in all details (Easterby-Smith et al., 2002). Realism is an important philosophy that is based on interdependency of human

values and beliefs and the reality shown by the senses is the truth, independent of the human mind (Saunders et al., 2009). Realism also defines how individuals react towards a real world situation (Johnson and Christensen, 2010). Mark et al. (2000: 15-16) suggest that as: *“realists, we see no meaningful epistemological difference between qualitative and quantitative methods. Instead we see both as assisted sense making techniques that have specific benefits and limitations.”* However, realism is quite similar to positivism, by considering a scientific approach for developing knowledge, based on collecting and understanding data (Saunders et al. 2009).

4.9.2 Pragmatism

Pragmatism views the research question(s) as the most important factor, and the research context and research consequences are driving forces determining the most appropriate methodological choice (Nastasi et al., 2007). Furthermore, *“pragmatists are not wedded to either positivism or interpretivism”* (Saunders et al., 2012). Pragmatism allows the mixing of quantitative and qualitative methods and the exact choice will be contingent on the particular nature of the research (Saunders et al., 2012).

However, the choice of the research methodology is influenced by the researchers' theoretical perspectives and also their attitudes towards the ways in which the data will be used. The philosophical position of pragmatism is that it allows more freedom of inquiry and does not restrict the research position (Gray, 2004; Silverman, 2011).

4.9.3 Constructionism

Social constructionism, sometimes called constructivism, is a philosophy that does not argue *“that the physical world itself is the product of the imagination of the social scientist, rather, it is he/she who puts order to it”* (Della Porta and Keating, 2013: 24). The knowledge is filtered through the theory which the researcher adopts or uses; therefore, the world is not there to be discussed by empirical research. In addition, knowing the reality is impossible; the focus should be on meaning through empathetic knowledge (Della Porta and Keating, 2013). Constructivism is a philosophy of learning that was founded on the premise which reflects on people’s experiences, and the way of understanding the world. It has become known as one of the greatest influences on the practice of education in the last twenty-five years. Constructivists deal with how the conceptions of reality come into being. They are observers of reality which are formed in daily life or in science (Jones and Brader-Araje, 2002). According to Brooks and Brooks, (as cited in Ultanir 2012:169) *“Constructivism is not a theory about teaching...it is a theory about learning...the theory defines knowledge as temporary, developmental, socially and culturally mediated, and thus, non-objective.”* Furthermore, constructivism advocates inductive rather than deductive reasoning (Janesick, 2003).

Table 4.6: Comparisons of four research philosophies

	Positivism	Realism	Interpretivism	Pragmatism
<i>Ontology: the researcher's view of the nature of reality or being</i>	External, objective and independent of social actors	Is objective. Exists independently of human thoughts and beliefs or knowledge of their existence (realist), but is interpreted through social conditioning (critical realist)	Socially constructed, subjective, may change, multiple	External, multiple, view chosen to best enable answering of research question
<i>Epistemology: the researcher's view regarding what constitutes acceptable knowledge</i>	Only observable phenomena can provide credible data, facts. Focus on causality and law like generalisations, reducing phenomena to simplest elements	Observable phenomena provide credible data, facts. Insufficient data means inaccuracies in sensations (direct realism). Alternatively, phenomena create sensations which are open to misinterpretation (critical realism). Focus on explaining within a context or contexts	Subjective meanings and social phenomena. Focus upon the details of situation, a reality behind these details, subjective meanings motivating actions	Either or both observable phenomena and subjective meanings can provide acceptable knowledge dependent upon the research question. Focus on practical applied research, integrating different perspectives to help interpret the data
<i>Axiology: the researcher's view of the role of values in research</i>	Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance	Research is value laden; the researcher is biased by world views, cultural experiences and upbringing. These will impact on the research	Research is value bound, the researcher is part of what is being researched, cannot be separated and so will be subjective	Values play a large role in interpreting results, the researcher adopting both objective and subjective points of view
<i>Data collection techniques most often used</i>	Highly structured, large samples, measurement, quantitative, but can use qualitative	Methods chosen must fit the subject matter, quantitative or qualitative	Small samples, in-depth investigations, qualitative	Mixed or multiple method designs, quantitative and qualitative

Source: Saunders et al. (2009: 119)

4.10 Research approaches

In general, the research methodology and methods are determined by the study area and the research aim and objectives which have a significant bearing on the choice of methodology adopted for a study (Saunders et al., 2009). Similarly, the selection of a research approach is, in the main, dependent upon the research aims and objectives and research questions and appropriate choices that are tailored to the setting and context of a study. Successful research can follow on from an approach to the gaining of knowledge that is either inductive or deductive – the two main approaches employed within research methodologies for the study of business (Saunders et al., 2009; Harrits, 2011).

An inductive approach aims at generating or building a theory and, therefore, it is involved with clearly observing particular phenomena and then generalising about them to reach some form of conclusion about the matter under investigation (Saunders et al., 2009). The deductive approach is concerned with testing existing theory through a process of precise examination of observations made in the course of an investigation, with the theory or generalisation applied to particular contexts or settings (Fieser and Dowden, 2006). Teddlie and Tashakkori (2009) consider there to be a third approach, i.e. the abductive approach, which involves deducing current theory from within the literature to develop expectations and hypotheses for what are believed likely observations, in addition to the simultaneous utilisation of observations from evidence being gathered so that interpretations can be developed.

The aim of this study, is to examine the benefits of implementing an effective e-

HRM strategy by using a research design that is deductive, to seek answers related to previously established theories. The study does not aim to generate new theory; however, in combining both deductive and inductive approaches, the research aims to achieve the research objectives and answer the key research questions.

4.10.1 Inductive and deductive research approaches

Consideration of the research approach is important so that the theories underpinning the research design are made explicit. The research approach guides the process of data collection, ensuring that the parameters and processes used result in organising the correct data (Saunders et al, 2009). There are two general approaches to the acquisition of new knowledge, namely inductive and deductive. Deductive and inductive are two different approaches that help in theorising for a clearer explanation and understanding of business phenomena, and facilitate enhanced prediction within that field (Sekaran, 2003). A deductive approach involves gathering numerical evidence that can confirm or reject the variable relationships that have been hypothesised following deduction from knowledge that already exists. For a deductive research, then, hypotheses are formulated from existing theories and concepts and these are then tested by the use of empirical data. An inductive research approach, on the other hand, involves a process that starts from collected empirical data and leads to the development of models, concepts and theories (Ghauri and Gronhaug, 2005; Trochim, 2006). Rubin and Babbie (2009: 39-40) concluded that, in influencing the research

process, either inductive or deductive approaches can be used for theory and state that:

An inductive approach is a research process based on inductive logic, in which the researcher begins with observations, seeks patterns in those observations, and generates tentative conclusions from those patterns.

A deductive approach is a research process based on deductive logic, in which the research begins with a theory, then derives hypotheses, and ultimately collects observations to test the hypotheses.

Table 4.7: Key differences between deductive and inductive approaches:

Deductive approach	Inductive approach
Scientific principles	Gaining an understanding of the meaning humans attach to events
Moving from theory to data	A close understanding of the research context
The need to explain the causal relationship among variables	The collection of qualitative data
The collection of quantitative data	A more flexible structure to permit changes of research emphasis as research processes
The application of controls to ensure validity of data	A realisation that the researcher is part of the research process
The operationalisation of concepts to ensure clarity of definition	Less concern with the need to generalise
A highly structure approach	
Researcher's independence of what is being researched	
The necessity to select samples of sufficient size in order to generate a conclusion	

Source: Saunders et al. (2009: 127)

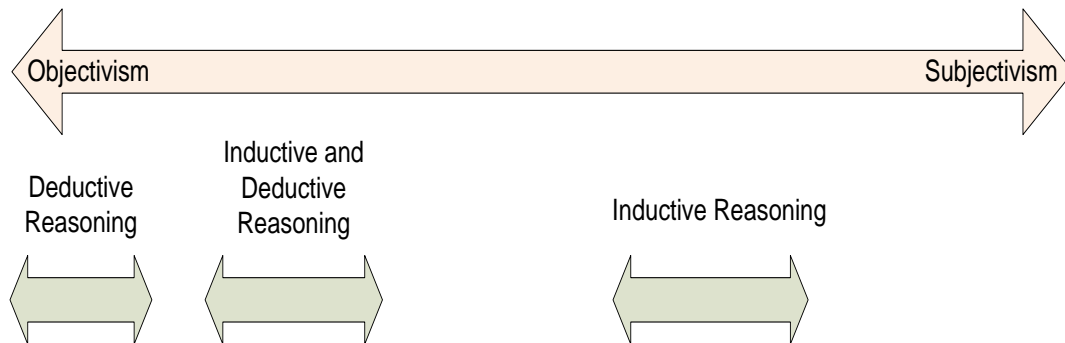
Table 4.7 shows the key differences between the two main approaches to research. The term '*building theory*' has also been used to describe inductive approach. It allows the researcher to acquire a greater understanding of phenomena by collecting and analysing data. Combining inductive and deductive approaches is considered an advantage and allows the researcher to cover the issue they are addressing from all angles (Saunders et al. 2009). As such, both approaches are employed within this research, with deduction being used to develop the theoretical literature framework and induction being used to reach the objectives of the research and support the findings from deductive quantitative.

Robson (2002) indicates that the progression of deductive research contains a progressive five-stage process that seeks to test theory. Saunders *et al.* (2009:124) elaborate on these stages by claiming that following the five-stage process will allow for the basis of explanation, anticipate the phenomena and therefore enable the theory to be developed. The five-stage process involves the following steps:

1. Deducing a hypothesis from the theory
2. Expressing the hypothesis in operational terms, which propose a relationship between two specific concepts or variables
3. Testing this operational hypothesis
4. Examining the specific outcomes of the enquiry
5. If necessary, modifying the theory in the light of the findings.

By comparison, the inductive approach is socially constructed and subject to changes, depending on time and the research context.

Figure 4.1: Linking reasoning with epistemological stance



Source: Crotty (1998)

4.11 Research Methods

Researchers have three main research methods at their disposal, namely, quantitative, qualitative, or mixed methods. The first relates to the collection of data that are numerical or can be usefully quantified and can be employed for all research strategies, whereas qualitative data refer to all data that are non-numeric or that have not been quantified, and the third involves combining qualitative and quantitative (Saunders et al., 2007). However, there is a fine line between quantitative and qualitative and as Davies (2007) points out, the delineation between quantitative and qualitative is not easily 'recognisable'. Wood and Welch (2010: 3) highlight the issue by stating the demarcation between quantitative and qualitative is not as simple as it looks:

...the distinction is widely regarded as problematic or an over-simplification, but it occurs frequently in the names of journals, courses, websites, and so on, so, despite the problems, it is a distinction which is

likely to have a substantial impact on the practice of research. Some researchers and projects stick to what they call 'quantitative' research, and others stick to 'qualitative' research. However, there is now increasing awareness that both styles of research may have a contribution to make to a project, which leads to the idea of mixing quantitative and qualitative methods.'

Punch (2005) contributes to the above debate by suggesting that the main differences between quantitative and qualitative research approaches lie in the nature of their data and the methods of collecting and analysing them, and selecting which one to use depends on the purposes and circumstances of the research more than on philosophical considerations. Robson (2011) points out that qualitative data generally support quantitative findings. In contrast, Nunan (2006: 20) believes that the distinction between qualitative and quantitative research is "*a philosophical one which is not always reflected in the actual conduct of empirical investigation*", and he stresses the positivistic notion that the basic function of quantitative research is "*to uncover facts and truths which are independent from the researcher*" and that "*qualitative researchers question the notion of an objective reality*". This particular point generates a continuous heated debate among scholars. This study takes the view that it is important for researchers to understand and to know what they are trying to find out and how to go about conducting research whether it is quantitatively and qualitatively focused. The following provides a synopsis of the difference between

quantitative and qualitative methods in order to highlight their strengths and weaknesses.

4.11.1 Quantitative methods

Quantitative research is linked with the positivist philosophy. Researchers set out to adopt what was called the scientific method in their investigations. A quantitative research method *“involves data collection procedures that result in numerical data which are then analysed mainly by statistical methods”* (Dörnyei, 2007: 24). According to Kumar (2014: 14), the quantitative approach *“follows a rigid, structured and predetermined set of procedures to explore; [it] aims to quantify the extent of variation in a phenomenon”*. Greener (2011) and Bryman and Bell (2011) also point out that quantitative research entails the collection of numerical data and is concerned with techniques that analyse numbers. Quantitative research is concerned with common features between groups rather than individuals. Therefore, it is centred on the study of variables that have these features. Large sample sizes often participate in the research. Dawson (2009:14) states that quantitative research *“generates statistics through the use of large scale survey research, using methods such as questionnaires or structured interviews”*. As indicated by Dörnyei (2007), this method has several advantages: it is systematic, focused and tightly controlled; it has precise measurements, and it provides reliable data that can be generalised to other contexts. Nevertheless, Dörnyei (2007) points out that the quantitative research is viewed by qualitative researchers as very simplistic, and reductionist as it averages out responses that

are out of context, failing to get the meanings that participants attach to their circumstances. Quantitative methods can be appropriate to investigate correlative relationships when there are a number of variables involved (Davidsson, 2013). However, qualitative research can be more appropriate to study the nature of phenomena in detail (Davidsson, 2013).

The following table illustrates the strengths and weaknesses of quantitative methods as listed by Saunders et al. (2009).

Table 4.8: Strengths and weaknesses of quantitative methods

Strengths	Weaknesses
Tests and validates already constructed theories	The research questions may not be clear and easy to understand.
Can generalise a research finding when data is analysed against samples of sufficient size.	The researcher may miss out on key elements as the research is focused upon hypothesis testing rather than hypothesis creation.
Provides accurate numerical data.	Data analysed might be too general or complex to understand.
Research results are primarily independent of the researcher.	

Source: Saunders et al. (2009)

4.11.2 Qualitative methods

Qualitative research, which is linked to interpretivism philosophy, involves the collection of a variety of empirical data in order to interpret certain phenomena, events, problems, occurrences, behaviours etc. Qualitative research seeks to capture the wealth of people's experience in their own terms. Understanding of the social reality emerges from an in-depth analysis of people's beliefs, views, perceptions, expectations etc. Qualitative methods involve data collection procedures that result in open-ended and non-numerical data (Dörnyei, 2007; Greener, 2011). These data are then analysed primarily by non-statistical methods (Dörnyei, 2007). Qualitative research is subjective and uses very different methods of collecting information, including individual, in-depth interviews and focus groups. The nature of this type of research is exploratory and open-ended. In qualitative research participants' perspectives and views are deemed important. Accuracy of interpretations can be verified through exchange and dialogue with the participants. Qualitative data consists of words while quantitative data consists of numbers, thus words are emphasised more than quantification in the collection and analysis of data in qualitative research (Bryman and Bell, 2011). According to Denzin and Lincoln, (2000: 3) "*qualitative researchers, study things in their natural settings, attempting to make sense of or interpret phenomenon in terms of the meanings people bring to them*". Gray (2014) also indicates that while the nature of data in quantitative methods is based on numerical data and the research focus is on facts, the nature of data in qualitative methods is based upon text and the research focus is on words and meanings. Qualitative methods seek to understand events and the social world through the eyes of the participants of study. According to Dawson (2009), qualitative research explores attitudes, behaviour and experiences

through such methods as interviews. The differences between quantitative and qualitative methods lies in the words themselves. Qualitative examines in depth the quality of something - it is a process of explaining in words. Quantitative, however, refers to the quantity - it is a process of quantifying in terms of numbers. Qualitative research aims to identify themes and trends in thoughts and perceptions. It aims to get to the root of the problem by probing for evidence, albeit subjective. The following table demonstrates the strengths and weaknesses of qualitative methods.

Table 4.9: Strengths and weaknesses of qualitative methods

Strengths	Weaknesses
Ability for in-depth case study	Difficult to test hypotheses and theories
The research question will be clear and easy to understand (or clarification can be easily obtained).	May not be possible to obtain a sufficient size sample population for analysis.
Provides understanding and clear description of personal experiences.	Data collection and analysis can be too time-consuming
Can conduct cross-case comparisons and analysis.	Results can be easily influenced by researcher's opinion.
Can determine respondents' understanding.	

Source: Saunders et al. (2009)

This study combines a qualitative method with a quantitative method, in order to achieve a holistic understanding of the impact and benefits of implementing e-HRM

at ADPD. This is in contrast to the many studies conducted on e-HRM which use only quantitative methods that are predominantly revealed in the literature. The study adopts the use of semi-structured interviews, which can lead the qualitative researcher into “*novel and unexpected areas*” raised by the interviewees (Berglund, 2007: 83). The use of semi-structured interviews enables the researcher both to identify key variables of implementing e-HRM within ADPD and understand them from the participants’ own viewpoints. Qualitative research can provide better understanding of a phenomenon with its in-depth analysis in order to make sense of complex situations. However, there is a risk that, while analysing data, the researcher makes too simple an interpretation of the findings, or that the researcher’s personal biases influence the results. For the purposes of this study, the researcher has selected the most appropriate methods to collect the most comprehensive and appropriate data to answer the research questions. The following table highlights the key differences between the quantitative and qualitative methods.

Table 4.10: Key differences between qualitative and quantitative methods

	Quantitative approach	Qualitative approach
Purpose	Study relationship, cause and effect	Examine a phenomenon as it is, has rich detail
Design	Developed previous study	Flexible, evolves during study
Approach	Deductive: tests theory	Inductive: may generate theory
Tools	Preselected instruments	The researcher is primary data collection tool

Sample	Large samples	Small samples
Analysis	Statistical analysis of numeric data	Narrative description and interpretation

Source: Ary et al, (2009)

It is important to stress that qualitative and quantitative data analysis are neither competing against each other nor incompatible. Using both types of analysis, in some cases simultaneously, is desirable in order to minimise the potential errors of using each one of them separately. There is strong argument for the need to opt for a greater diversity in the range of methods used to better understand e-HRM. Since the use of one approach in isolation seems to make this approach open to error; therefore, the use of both methods - questionnaires and semi-structured interviews - is deemed appropriate

4.11.3 Mixed Methods combining quantitative and qualitative

Merging quantitative and qualitative research methods within the same study is known as a mixed methods approach (Leech and Onwuegbuzie, 2009), is not a new approach; it dates back to the 1960's, but has since become more popular with researchers. However, as Tashakkori and Teddlie (2003:697) state "*The emergence of mixed methods as a third methodological movement in the social and behavioural sciences began during the 1980's.*" Today, there is a plethora of publications related to mixed methods, to the point where it was dubbed the third methodological movement (Tashakkori and Teddlie, 2003).

4.11.3.1 Defining mixed methods

Mixed methods comes under different labels '*multi-methods*' and '*triangulation*'. It is defined differently by various authors. For Stange et al. (2006: 24) mixed methods "*involved integrating quantitative and qualitative approaches to generating new knowledge and can involve either concurrent or sequential use of these two classes of methods to follow a line of inquiry.*" Creswell et al (2003: 66) define mixed methods as "*Integrating quantitative and qualitative data collection and analysis in a single study or a program of enquiry.*" According to Johnson and Onwuegbuzie (2004:14), "*Mixed methods is a 'research paradigm whose time has come'.*" Johnson and Onwuegbuzie (2004:17) go on to define mixed methods as "*the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study.*" For the purpose of this study, the mixed methods approach involves conducting research that combines collecting, analysing, and integrating (or mixing) quantitative and qualitative data in a single study.

The mixed methods approach enables an exploration of human capital from a wider scope. The quantitative method generates numerical data that can be treated by using tools from the field of statistics (Yasin et.al, 2013), while the qualitative research is considered to be exploratory and inductive in order to obtain a deeper understanding of human capital to support the quantitative results. In this

way, mixed methods will enable the researcher to address a wider and more defined range of the research questions as they are not confined to one approach.

Table 4.11: Mixed methods

Strengths	Weaknesses
Words, pictures, and narrative can be used to add meaning to numbers. The opposite is true - numbers can be used to add precision to words, pictures, and narrative.	It is difficult for a single researcher to carry out both qualitative and quantitative researches concurrently.
Researcher can generate and test a grounded theory.	Researcher may not have the required skills and experience to use multiple methods and understand how to integrate the results appropriately.
A broader and more complete range of research questions can be answered.	Methodological purists contend that one should always work within either a qualitative or a quantitative paradigm – specialisation leads to more focus.
A researcher can use the strengths of an additional method to overcome the weaknesses in another method by using both in the same study.	Using more than one method involves higher expenses.
Good conclusions can be made through convergence and corroboration of findings.	Collecting the required data tends to be a time-consuming process.

Supports generalisability of the results.	Some of the details of mixed research remain to be worked out fully by research methodologists (e.g., problems of paradigm mixing, how to qualitatively analyse quantitative data, how to interpret conflicting results).
Introduces reliable knowledge and contributions to link theory with practice	

Source: Johnson and Onwuegbuzie (2004:21).

In short the boundary separating qualitative and quantitative research is hardly visible and is not clearly defined. It could be argued that most qualitative work has some form of quantitative analysis involved, and visa-versa.

The following table shows and compares clearly the key features between the three main data collection methods:

Table 4.12: Quantitative, mixed methods and qualitative research methods

	Quantitative Research	Mixed Methods	Qualitative Research
Scientific method	Deductive or 'top-down' The researcher tests hypotheses and theory with data	Deductive and inductive	Inductive or 'bottom-up' The researcher generates new hypotheses and grounded theory from data collected during fieldwork
View of human behaviour	Behaviour is regular and predictable	Behaviour is somewhat predictable	Behaviour is fluid, dynamic, situational, social, contextual, and personal
Most common	Description, explanation,	Multiple objectives	Description, exploration, and discovery

research objectives	and prediction		
Focus	Narrow-angle lens, testing specific hypotheses	Multi-lens focus	Wide-angle and 'deep-angle' lens, examining the breadth and depth of phenomena to learn more about them
Nature of observation	Attempt to study behaviour under controlled conditions	Study behaviour in more than one context or condition	Study behaviour in natural environments. Study the context in which behaviour occurs
	Quantitative Research	Mixed Methods	Qualitative Research
Nature of reality	Objective (different observers agree on what is observed)	Common sense realism and pragmatic view of world (i.e. what works is what is 'real' or true)	Subjective, personal, and socially constructed
Form of data collected	Collect quantitative data based on precise measurement using structured and validated data collection instruments (e.g. closed-ended items, rating scales, behavioural responses)	Multiple forms	Collect qualitative data (e.g. in-depth interviews, participant observation, field notes, and open-ended questions) The researcher is the primary data collection instrument
Nature of data	Variables	Mixture of variables, words, images	Words, images, categories
Data analysis	Identify statistical relationships	Quantitative and qualitative	Search for patterns, themes, and holistic features
Results	Generalisable findings	Corroborated findings	Particularistic findings. Representation of insider

		may generalise	(i.e. “emic”) viewpoint. Present multiple perspectives
Form of final report	Statistical report (e.g. with correlations, comparisons of means, and reporting of statistical significance of findings)	Eclectic and pragmatic	Narrative report with contextual description and direct quotations from research participants

Source: Creswell (2003)

4.11.4 The rationale for selecting mixed methods

Based on the research problem formulated by this study which aims to examine the challenges facing the implementation of e-HRM within Abu Dhabi , Department (ADPD) (UAE) mixed methods provides a holistic methodological approach, involving facts and figures obtained through quantitative survey, and sense-making of these through qualitative interviews. Various methodological approaches have been employed in the extensive related e-HRM literature, mostly using positivist quantitative survey. However, it is important to select methods that are most suitable for collecting related information to conduct and complete the study under consideration, adopting the research methods that fit the nature of the research problem and the research questions. The selection of mixed methods is deemed appropriate, in which quantitative and qualitative methods are combined, as mixed methods are becoming increasingly recognized as valuable instruments of data collection, because they can make use of the respective strengths of each method. Qualitative methods through semi-structured interviews help in identifying the

challenges of implementing an effective e-HRM strategy within ADPD which, is a complex organisational government institution. The two methods, quantitative and qualitative, complement each other. Guba and Lincoln (1994:105) argue that questions of research method are of secondary importance to questions regarding which paradigm is applicable to the research, which was earlier defined as the basic belief system or world view that guides the investigation, not only in choices of method but in ontologically and epistemologically fundamental ways. They point out that both qualitative and quantitative methods may be used appropriately with any research paradigm.

It is worth noting that a mixed methods approach has been criticised by some researchers who claim that quantitative and qualitative methods should not be mixed as they have vastly different underlying assumptions. In contrast, Caracelli and Greene (1997) acknowledge the value of mixed methods by determining three typical uses of a mixed methods study: (1) testing the agreement of findings obtained from different measuring instruments, (2) clarifying and building on the results of one method with another method, and (3) demonstrating how the results from one method can impact subsequent methods or inferences drawn from the results.

To conclude, the rationale for adopting a mixed methods approach is closely related to the purpose of the study, the nature of the problem and research questions. As Johnson and Onwuegbuzie (2004:14-16) stress *“The aim of mixed methods research is not to replace either of qualitative or quantitative approaches*

but rather to draw from the strengths and minimise weaknesses of both in single research studies and cross studies.”

To sum up a mixed method approach will enable the researcher to:

1. Examine the issue of e-HRM within ADPD from all angles.
2. Enhance the degree of reliability, validity and generalisability of the findings.
3. Overcome any potential deficiencies that may occur as a result of employing a single method and thus might lead to greater confidence in the conclusions of the study.

Thus the use of mixed methods in this study is for the above reasons.

Selecting a research methodology and methods for a particular study is often debatable. Easterby-Smith et al. (2012) state that establishing the most suitable philosophy is still under discussion among researchers Robson (2011) and Jankowicz (2005) argue that there is no straightforward way to justify which method is better than another for a particular research. Mixed methods is linked to the study objectives in order to access a comprehensive range of information and experience. Many mixed methods researchers tend to reject the paradigmatic differences between assumptions made of viewing the world which view qualitative and quantitative methods as incompatible (e.g., Day, Sammons, & Gu 2008; Ryan & Bernard, 2000; Smith, 2006).

Based on the purpose of the study, the nature of the problem and the research questions and objectives, a mixed method approach is deemed suitable for this study. Both quantitative and qualitative approaches will be used.

Due to the nature of the objectives for this research mixed methods are not only advantageous but also necessary to explore the issue e-HRM from various angles in order to provide rigour to a research topic. Additionally, any approach will be in line with these objectives, that is, the analysis of barriers to implementing e-HRM (Strohmeier, 2007). This study takes the combination of qualitative and quantitative research approaches as relying on one single approach in isolation could reduce the effectiveness of the study and makes this approach open to error. In qualitative research, the research will be concerned with the methodology in regard to weighing the HR personnel and the training methods that are best applicable.

4.12 Research Design

The research design is the strategy used to answer the research questions and achieve the research objectives, e.g. sampling, the data collection or the data analysis (Saunders et al., 2009). A research design is defined by Yin (2003: 20) as *“a logical plan for getting from here to there, where here may be defined as the initial set of questions and there is the conclusions to these questions”*. Saunders et al. (2012: 680) view the research design as *“a framework for the collection and analysis of data to answer research questions and meet research objectives providing reasoned justification for choice of data sources, collection methods and*

analysis techniques". The process of a research design is to ensure that the evidence acquired allows the researcher to answer the main research questions in a clear manner. In addition, it develops the plan of how research should be carried out. It also includes theoretical and philosophical assumptions upon which research is based. This will then enlighten the methods adopted for the study. Creswell (2012; 2014) identifies types of mixed methods designs as follows:

- a) The convergent parallel design, in which quantitative data collection and analysis and qualitative data collection and analysis are compared or related to achieve the interpretation;
- b) The explanatory sequential design, where quantitative data collection and analysis is followed up with qualitative data collection and analysis to get the interpretation;
- c) The exploratory sequential design, where qualitative data collection and analysis builds to quantitative data collection and analysis to get the interpretation; "to find out what is happening to seek new insights, to ask questions, and to assess phenomena in a new light", (Robson, 2003: 59).
- d) The embedded design, where quantitative and qualitative data are collected simultaneously or sequentially but one form of data plays a supportive role to the other form of data.

Although there are several strategies that can be adopted for collecting data, Churchill and Iacobucci (2009) argue that there is no research strategy which is

more superior or less inferior to any other strategy. According to Bryman and Bell (2011), the choice of research design is based on the research questions, objectives, time, the extent of the existing knowledge and other research.

Table 4.13: Instruments of data collection

Strategy	Form of research question	Requires control over behavioural events	Focuses on contemporary events
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how, many, how much	No	Yes/No
History	How, why	No	No
Case study	How, why	No	Yes

Source: Yin (2009: 8)

4.13 Types of Research

The literature on methodology and methods suggests that there are three main types of research: exploratory, descriptive and explanatory (Saunders and Lewis, 2012). Kumar (2014) adds to this list the correlational research, which is used to

establish or discover the existence of a relationship, association or interdependence between two or more aspects of a phenomenon or a situation. Similarly, Hair et al. (2007) argue that, exploratory research is used when the researcher has little knowledge or information of the research problem and wishes to clarify his/her understanding of a problem and gain insights about a topic of interest (Saunders et al., 2012). Hair et al. (2007: 419) assert that descriptive research is “*designed to obtain data that describes the characteristics of the topic of interest in the research*”. The purpose of descriptive research, as Saunders et al. (2012: 669) point out, is “*to produce an accurate presentation of persons, events or situations*”. Saunders and Lewis (2012: 113) define explanatory study as “*research that focuses on studying a situation or a problem in order to explain the relationships between variables*”. They indicate that an explanatory study takes descriptive research a stage further by exploring factors and looking for explanation behind a particular occurrence. Moreover, Punch (2006), argues that while a descriptive study asks about what the case or situation is, an explanatory study asks about why or how this is the case. “*To portray an accurate profile of persons, events, or situations*”, (Robson, 2003: 59). As far as this study is concerned, a combination of exploratory and explanatory research is considered fitting.

4.14 Data collection methods

Research methods are those used for data collection and generation (Oppenheim, 2000). There are two methods of data collection that can be used by any business

research: secondary and primary. Yin (2009) suggests six main evidence sources for use in a case study approach; their strengths and weaknesses are shown in Table 4.15. For Yin (2009), no one data source has complete advantage over another and so multiple evidence sources can aid in the clarification of the genuine meanings of phenomena under investigation. Researchers have also been encouraged to employ more than one method by Silverman (1993) and Denzin and Lincoln (2008), as they recognise the value of corroborating findings so that data validity can be improved. There is no research design which is inherently superior or inferior to any other (Saunders et al, 2007).

Table 4.14: Strengths and weaknesses of six sources of evidence

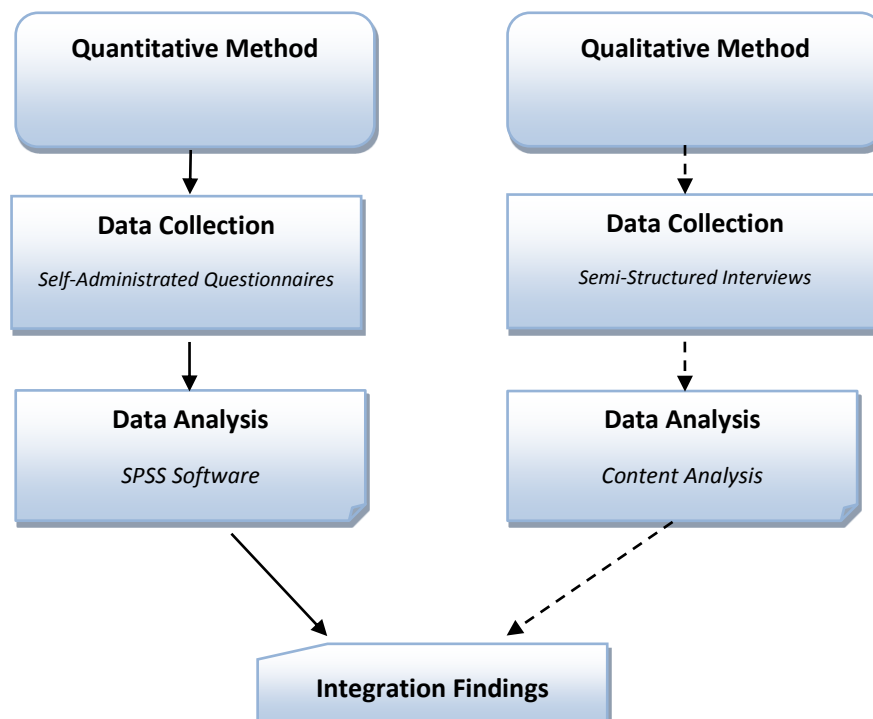
Source	Strengths	Weaknesses
Direct observation	<ul style="list-style-type: none"> ▪ Reality (events in real time) ▪ Contextual 	<ul style="list-style-type: none"> ▪ Time consuming ▪ Selectivity (poor, unless broad coverage) ▪ Reflexivity (events processed differently)
Interviews, Focus groups	<ul style="list-style-type: none"> ▪ Targeted (focus on case studies) ▪ Insightful (perceived causal inferences) 	<ul style="list-style-type: none"> ▪ Bias (due to poorly constructed questions) ▪ Response bias ▪ Inaccuracies (interviewees say what they think the researcher wants to hear)
Archival records	<ul style="list-style-type: none"> ▪ Same as above and ▪ Precise and quantitative 	<ul style="list-style-type: none"> ▪ Same as above and ▪ Accessibility limited
Documents e.g. reports, e-mails	<ul style="list-style-type: none"> ▪ Stable ▪ Unobtrusive (as no result of case study) ▪ Exact 	<ul style="list-style-type: none"> ▪ Low retrievability ▪ Biased selectivity (if incomplete) ▪ Reporting bias

Source	Strengths	Weaknesses
	(exact references and details) ▪ Broad coverage (events, time, settings)	(bias of the researcher) ▪ Access (deliberately withhold)
Participant observation	▪ Same as for direct observation ▪ Insightful into interpersonal behaviour and motives	▪ Same as for direct observation ▪ Bias (due to researcher's manipulation of events)
Physical artefacts	▪ Insightful into cultural features ▪ Insightful into technical operations	▪ Selectivity ▪ Availability

Source: Yin (2009:102) and Yin (2012:10).

To conclude, Zohrabi (2012) indicates that the variety of techniques will make the data more substantial and valid. The instruments for gathering data for this study are DED employee surveys and semi-structured interviews with the DED management.

Figure 4.2: Summary of the methods used in this study



Source: Designed by the present researcher

4.15 Data collection instruments

Saunders et al. (2012) describe research methods as a way of collecting, analysing and interpreting data that the researcher obtained for their studies. There are various types of methods for collecting quantitative and qualitative data for research. Jankowicz (2000:209) defines a research method as “*A systematic and orderly approach taken towards the collection and analysis of data so that information can be obtained from this data*”. There are many different methods for collecting data. The common methods of data collection are observation, questionnaire, and interviews (Denzin and Lincoln 2000).

Table 4.15: Relevant types of data collection methods

Strategy	Form of research question	Requires control over behavioural events	Focuses on contemporary events
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how many, how much	No	Yes/No
History	How, why	No	No
Case study	How, why	No	Yes

Source: Adapted from Yin (2009)

Easterby-Smith et al. (2012) argue that researchers using an inductive approach are more likely to work with qualitative data and to use a variety of methods to collect these data in order to establish different views of a phenomenon. Thus, multiple techniques are used for data collection for this study, i.e. semi-structured interviews and questionnaires. The utilisation of multiple techniques for collecting data aims to use the technique of triangulation, which significantly increases the validity and credibility of the study, as stated by Bryman and Bell (2007), who suggest that validity of the research can be increased by use of triangulation, while, Jankowicz (2005) suggests that the approach of triangulation is useful to cross-check the results of one method or technique with another, thus increasing the credibility of the research.

4.15.1 Questionnaire

A questionnaire survey is the most widely used technique for gathering primary data concerning the respondents' attitudes, views, opinions, perceptions, expectations, etc., in business and management research (Saunders et al., 2000; Collis and Hussey, 2003; Creswell, 2003; Sekaran, 2003). Jankowicz (2000: 222) defines surveys as *"particularly useful when you want to contact relatively large numbers of people to obtain data on the same issue or issues, often by posing the same questions to all."* According to Kumar (2005: 126), *"a questionnaire is a written list of questions, the answers to which are recorded by respondents who*

read the questions, interpret what is expected and then write down the answers”.

Thiétart (2001) states that a questionnaire is the most developed method of collecting primary data, while Saunders et al. (2009) suggest it to be one of the most widely used data collection techniques and, as each respondent is asked to respond to the same set of questions, it provides an efficient way of collecting responses from a large sample.

The utilisation of the questionnaire data collection instrument helped the researcher to gain first-hand information about the views and awareness of the employees regarding e-HRM implementation at ADPD, while the use of semi-structured interviews allowed the researcher to obtain an insight into the current issues and challenges faced by the managers in implementing e-HRM. Furthermore, the triangulation of both the techniques and their analyses helped the researcher to obtain a more accurate and holistic view of the current situation of human capital management, to develop a new e-HRM framework and to suggest the changes that must be made in order to have successful implementation of the new e-HRM framework in line with the UAE Vision 2030.

Sarantakos (1998), Gilham (2002); and Creswell (2003) identify a number of advantages and disadvantages for questionnaires as summarised as follows:

Table 4.16: Advantages and disadvantages of questionnaire

Advantages	Disadvantages
Questionnaires are easier to organise and arrange.	Tick appropriate boxes questions may restrict and frustrate respondents.
Questionnaires encourage pre-coded answers.	Pre- coded questions can bias the findings.
Questionnaire is suitable to respondents who do not need to think how to express their ideas.	Questionnaires give little chance for the researcher to check the truthfulness of answers.
Low cost in time and money.	Rectifying poor questionnaire result in a substantial negative damage on the progress of the research.
Easy to get information from a lot of people quickly and efficiently.	Normally questionnaires are associated with low response rate.
Respondents can complete the questionnaire when it suits them.	Lack of motivating respondents to answer the questionnaire.
Advantages	Disadvantages
Analysis of answers to close-ended questions tends to be more objective.	Problems of data quality (completeness and accuracy).
Questionnaires may be simply sent unannounced to the respondents.	Misunderstandings difficult to correct.
Respondents under less pressure for immediate response.	Lack of control over order and context of answering questions.
Respondents' anonymity and information confidentiality.	The researcher does not get information other than the written answers.
Questionnaire provides reliable data for testing a hypothesis.	It is assumed that the targeted respondents have the required answers.
Standardisation of questions helps to achieve economies of scale.	Standardisation does not secure complete answer.

Source: Sarantakos (1998), Gilham (2002) and Creswell (2003)

4.15.2 Questionnaire Design

The first question to address when designing a questionnaire is what information should be collected to answer the research questions. A questionnaire design deals with the preparation of the questions in the context of the questionnaire. The questionnaire design requires that the questions should be listed in a logical order (Sarantakos 1998). According to Robson (2002) it is important that the questions are formulated in such a way to answer the questions and achieve the objectives of the research. A good design encourages cooperation of respondents and gets them excited to answer the questions. The questions should be specific and clear so that respondents do not spend too much time or exert a lot of effort to understand and answer the questions. Personal questions, which could evoke respondents' resistance and lack of cooperation, should be completely avoided.

The sound design of the questions and structure of the questionnaire are very important to achieve the internal validity and reliability of the collected data (Saunders et al., 2007). Internal validity refers to the ability of the questionnaire to measure what it intended to measure. Collis and Hussey (2003) state that the responses to research questions may turn out to be highly reliable but the results will be worthless if the questions do not measure what the researcher intended them to measure - the inevitable result will be low validity. In this regard, Foddy (1994:17) stresses that:

The question must be understood by the respondent in the way intended by the researcher and the answer given by the respondents must be understood by the researcher in the way intended by the respondent.

The questions in this research were formulated in such a way as to get the required data as efficiently as possible. Closed questions were used in designing the questionnaire because the time factor for (targeted respondents) is very important. In fact, closed questions provide a number of alternative answers and options, and are quicker and easier to answer. In addition, these types of questions are easy to process, analyse and compare (Sekaran 2003). However, because of forcing respondents to choose between predetermined alternatives or options, lack of spontaneity and expression cannot be ruled out.

Open-ended questions do not offer alternatives in terms of answering the questions; they are easy to ask and provide participants opportunity to give opinions (Sekaran 2003). The disadvantages of open-ended questions lie in the fact that they are difficult to answer and analyse (Hussey and Hussey 1997).

4.15.3 Language and wording of the questionnaire

The language and the wording of the questionnaire should be appropriate to explore respondents' attitudes, perceptions, and feelings. Kervin (1992) suggests that good question wording will ensure measurement validity. Sekaran (2003) and Moore (2006) introduce the following principles:

1. Simple language: jargon and technical terms should be avoided as much as possible.
2. Short questions: questions should be short and direct because long and indirect questions increase the possibility of the question being misunderstood.
3. Double-barrelled questions: asking questions which have sub parts (more than one question at one time) leads to confusion and ambiguity.
4. Leading questions: phrasing questions in such a way that they induce the respondents to give responses that the researcher would want them to give would result in unreliable responses.
5. Biased questions: biased questions which make one response more likely than another, regardless of the respondent's opinion, should be avoided.
6. Negative questions: negative questions may confuse the participants especially when respondents are asked to indicate whether they agree or disagree with a particular statement.
7. Ambiguous questions: ambiguous wording should be avoided so that all respondents understand the questions in the same way.
8. The order and flow of questions: the questionnaire should lead respondents to move in answering questions of a general nature to those that are more specific, and from questions that are relatively easy to answer to those that are progressively more difficult.

The above guidelines were taken into account in formulating the language and the wording of the questionnaire for this study.

Dawson (2009) divides questionnaires into three types: closed-ended, open-ended, or a combination of both.

- Closed-ended questionnaires are used to generate statistics in quantitative research. These questionnaires follow a set format with boxes to tick or scales to rank. Great numbers can be produced because of ease of analysis.
- Open-ended questionnaires are used in qualitative research. They consist of a set of questions with a blank section for participants to write their answers.
- A combination of both types of questionnaires is used by some researchers. Such questionnaires start with a series of closed questions and finish with a section of open questions for more detailed responses.

Cohen et al. (2011) call the closed-ended questionnaires structured questionnaires, the open-ended ones unstructured questionnaires, and the combination of both semi-structured questionnaires. They argue that the smaller the size of the sample, the less structured, more open and word-based the questionnaire is likely to be while the larger the size of the sample, the more structured, closed and numerical the questionnaire should be.

Dawson (2009) highlights some advantages and disadvantages of open and closed questions. While open questions tend to be slower to administer, harder to record responses, difficult to code, and take longer to answer, closed questions tend to be quicker to administer, easier to record answers, easy to code and quick to answer. However, open questions enable respondents to speak their minds and raise issues, which is not the case with closed questions, where response is stifled. Greener (2011) provides two reasons that make using open questions in some research projects more appropriate: to avoid imposing the researcher's ideas and concepts upon the respondent, and when it is impractical to give all of the possible options, which might be too many.

Dörnyei (2010) also argues some advantages and disadvantages of questionnaires. He highlights their 'unprecedented efficiency' in terms of financial resources and researcher time and effort as well as being very versatile; that is, they can be used with a variety of people in a variety of situations dealing with a variety of topics. However, there are some limitations that threaten the reliability and validity of questionnaire data if the questionnaires are ill-constructed.

Nunan (2006) instructs researchers to be aware of the types of questions they include in questionnaires as well as question wording, so as to avoid culturally biased questions, which is more likely to happen in language and education research when the researcher and respondents do not share the same culture. Similarly, Dörnyei (2010) suggests some of the key issues in questionnaires,

including: simplicity of the questions and the short time that respondents spend working on a questionnaire which result in superficiality of answers and limit the depth of the investigation; literacy problems of some respondents (especially those with limited L2 proficiency); unreliable and unmotivated respondents; having no opportunity to correct the respondents' mistakes if they misread or misinterpret questions; and the social desirability or prestige bias which may affect the results when people do not provide true answers.

4.15.4 Translation of the questionnaire and interview questions

The process of translating questionnaires is a widely used practice in research to collect data. The most common reason for translating questionnaires and interview questions is to gauge participants' views and perceptions in the language they speak, understand and are comfortable to express their views. Therefore, it was important that the questionnaire was translated accurately from English into Arabic. Lyenger (1993:174) points out how retention of meaning is key for validity. For this study, the questionnaire was initially translated by a professional translating agency. So that an accurate translation could be assured, the versions were then checked by an Arabic linguistic expert supervisor at Liverpool Business School.

The advantages of the questionnaire over interviews, as Cohen et al. (2011) point out, are: the questionnaire tends to be more reliable; it is more economical in terms of time and money; it is possible to be mailed; and because it is anonymous, it encourages more honesty (although not guaranteed). But still, Cohen et al. (2011) argue that interviews can be effective and efficient and accurate data will be obtained if the interviewer is skilful and does his or her job well and the respondent is sincere and well-motivated.

The questionnaire has a five-point Likert scale, ranging from (1) '*strongly disagree*' to (5) '*strongly agree*'.

1	2	3	4	5
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Kumar (2014) points out that of the three types of scale that measure attitude (which are the Likert, Thurstone and Guttman scales), the Likert scale is the most commonly used. According to Bertram (2007), some of the strengths of the Likert scale are that it is simple to construct, likely to produce a highly reliable scale, easy to read and complete for participants and that a universal method of collecting data is used, which makes it easy to understand and code them. Bryman (2012:166) states that the Likert scale "*is essentially a multiple-indicator or multiple-item measure of a set of attitudes relating to a particular area. The goal of the Likert scale is to measure intensity of feelings about the area in question.*"

4.15.5 Interview

The interview is the most widely employed method for data collection in qualitative research (Bryman 2004). The main purpose of the interview is to collect valid and reliable data which are relevant to the questions and the objectives of the research. The interview takes more of the form of dialogue and it allows the researcher and the respondent to move back and forth in time to analyse the past, interpret the present and predict the future.

4.15.6 Defining Interview

According to Saunders et al. (2003) an interview means a purposeful discussion between two or more people. *“Every step of an interview brings new information and opens windows into the experiences of the people you meet”* (Rubin and Rubin 1995:1). Marchall and Rossman (1989: 82) state that: *“An interview is a method of data collection that may be described as an interaction involving the interviewer and the interviewee, the purpose of which is to obtain valid and reliable information.”* To confirm this view, O’Leary (2004: 162) defines an interview as *“a method of data collection that involves researchers asking respondents basically open-ended questions”*.

4.15.7 Types of Interviews

There are three main types of interviews: structured, semi-structured, and unstructured interviews (Sarantakos 1998). Structured interviews use pre-established questions, which are asked in a predetermined order. They are called formal or standardised interviews. They are like questionnaires read by the researcher.

“Every structured interview follows a written interview guide: a document which looks very much like a questionnaire, and provides item sequence details, steering instructions, items, alternatives and recording instructions” (Jankowicz 2005: 320).

This type of interview requires a strict adherence to a set of predetermined questions. Structured interviews are mostly employed in quantitative research (Sarantakos 1998). Semi-structured interviews are non-standardised interviews in which the interviewer has a list of questions which may vary from one interview to another. Questions can be added or deleted depending on the organisational context and the interview condition (Bryman 2004). This type of interview may be employed in both qualitative and quantitative research. Semi-structured interviews can be described as a flexible method for collecting data which starts with some defined questioning, which gradually moves into a more conversational style of interview during which questions are answered in an order more natural to the flow of conversation.

Unstructured interviews are sometimes called in-depth interviews. The interviewer has no predetermined list of questions, but has only a list of themes as an interview guide and the questions are informal (Bryman 2004). A phenomenological (qualitative) approach suggests unstructured questions (open-ended questions) to explore an answer in more depth. The unstructured interview is flexible and it is used mostly in qualitative research (Sarantakos 1998). In fact, this type of interview aims to draw out information about attitudes, opinions and beliefs around particular themes, ideas and issues without using predetermined questions.

Table 4.17: Strengths and weaknesses of interviews as data collection instrument

Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ Targeted – directly focuses on research topic ▪ Insightful – offers perceived causal inferences ▪ Depth – interviews are as per detailed and deep data ▪ Equipment – no expensive equipment 	<ul style="list-style-type: none"> ▪ Bias because of poorly constructed questions ▪ Responses are biased ▪ Inaccurate due to poor recall ▪ Reflexivity – interviewee answers with content that interviewer wants to hear

Source: Yin (2003:86) and Denscombe (2000:161).

4.15.8 Justification of data collection instruments selected by this study

Taking into consideration the challenges of implementing an effective e-HRM strategy within the ADPD in the UAE, and the complex nature of the organisational culture with its problem of resistance to change, in addition to the research

questions set by this study, the use of a single method would have limited scope and depth to do justice to the topic under consideration. Therefore, it was necessary to combine quantitative with qualitative methods. The combination of both methods provided the researcher with the opportunity to statistically analyse the numerical data whilst also recognising the complex perceptions and emotional factors that influence change initiatives. In order to achieve the aim of this study and answer the research questions, two methods of data collection were used:

1. Quantitative data collection through questionnaire
2. Qualitative data from semi-structured interviews

The first stage collected quantitative data. The second stage used qualitative methods that entailed semi-structured interviews to provide rich descriptive data to support the findings of the surveys. Insights and knowledge from the extant literature on human capital have been integrated and formulated in the form of interview themes in order to gain a fuller, richer account of the participants' voices about the issues of e-HRM at ADPD.

The choice of these methods is based on the nature of the problem and the research questions and since the use of one approach in isolation seems to make it vulnerable to error.

4.16 The insider researcher

'Insider research' is a term which indicates that the research projects where the researcher has a direct involvement or connection with the research setting or work place (Robson 2002). Insider researcher contrasts with traditional notions of objectivism quantitative in which the researcher is an 'objective outsider' studying subjects external to his/herself (Denzin and Lincoln 2000). Thus, the researcher who shares a particular characteristic, for example gender, ethnicity or culture, with the researched is an insider, and everyone else, not sharing that particular characteristic, is an outsider. On this basis, "*the insider and outsider perspectives are two mutually exclusive frames of reference*" (Olson 1977:171).

There are both advantages and disadvantages of being an insider researcher (Corbin-Dwyer and Buckle, 2009; Hockey, 1993; Mercer, 2007; Unluer 2012; Coghlan, 2003). According to Coghlan (2003: 454) insider researchers are "*immersed experientially in the situation*", which provides them with the following advantages:

- the opportunity to acquire 'understanding in use' rather than 'reconstituted understanding';
- knowledge of an organisation or community's everyday life – its rules and norms;
- researchers can use the appropriate 'internal jargon' and draw on their own experience in asking questions and interviewing;
- they can participate in discussions or merely observe what is going on without others necessarily being aware of their presence.

Coghlan (2003:454) also identifies some disadvantages for research insiders, including:

- when interviewing they may assume too much and not probe as deeply as outsiders;
- they can find it difficult to gain access to relevant data because of their roles within internal hierarchies;
- they can suffer role conflict and find themselves caught between 'loyalty tugs, behavioural claims and identification dilemmas' (Coghlan 2003:454)

The researcher is a high-ranking officer at ADPD, the researcher is therefore in a unique position to study the issue of e-HRM in depth because the researcher has insider knowledge. Moreover, the researcher also has easy access to people and information that can further enhance that knowledge.

4.17 Sampling population and sample size

Sampling may be defined as the process, or technique of selecting a suitable sample, or a representative section of a population for the purpose of determining parameters or characteristics of the whole population (Webster, 1985).

The research population is the group of things, elements or people that a researcher studies, and the research sample is a segment of all the potential

cases from that research population (Sekaran, 2003; Saunders et al., 2009). According to Kumar (1999: 148):

Sampling is the process of selecting a few (a sample) from a bigger group (the sampling population) to become the basis for estimating or predicting a fact, situation or outcome regarding the bigger group. A sample is a sub-group of the population you are interested in.

Robson (2002: 260) suggests that “A sample is a selection from the population,” while Saunders et al. (2000: 150) state that: “Sampling techniques provide a range of methods that enable you to reduce the amount of data you need to collect by considering only data from a sub-group rather than all possible cases or elements.”

The population refers to all the cases (Robson, 2002), while a sample refers to a subset of the population, and it consists of some members selected from the population (Sekaran, 2000). It is possible to collect data from an entire population for research. However, it should not be assumed that these data provide more useful results than collecting data from a sample which represents the research population (Saunders et al., 2007). In this context, Bartlett et al. (2001:43) states that:

A common goal of survey research is to collect data representative of a population. The researcher uses information gathered from the survey to generalise findings from a drawn sample back to a population, within the limits of random error.

In explanation for the use of a sample, according to Saunders et al. (2007), a researcher needs to use a sample and it provides accurate data for all research questions when:

- a. It would be impracticable for the researcher to collect data from the entire population; for instance, a researcher might be able to get permission to gather data from a smaller cases sample;
- b. It might be possible for a researcher to be able to collect data from the whole population but the cost of collecting data would prevent it;
- c. Time restrictions would prevent the researcher from collecting data from the whole population (e.g. when a researcher has a tight deadline for submission of research). In other words, collecting data from a smaller number of cases possibly will save more time which can be spent designing and piloting the data collection techniques
- d. The researcher may need the results quickly.

Gray (2014) identifies two main approaches or procedures of sampling: probability sampling (which involves selecting random samples of subjects from a given population that represents the total number of possible elements as part of the study) and non-probability sampling (where the selection of participants in a study is non-random). Probability sampling includes simple random sampling and stratified sampling and cluster sampling while non-probability sampling includes convenience sampling, quota sampling and purposive sampling. Probability sampling designs are considered valuable due to the possibility to be precise

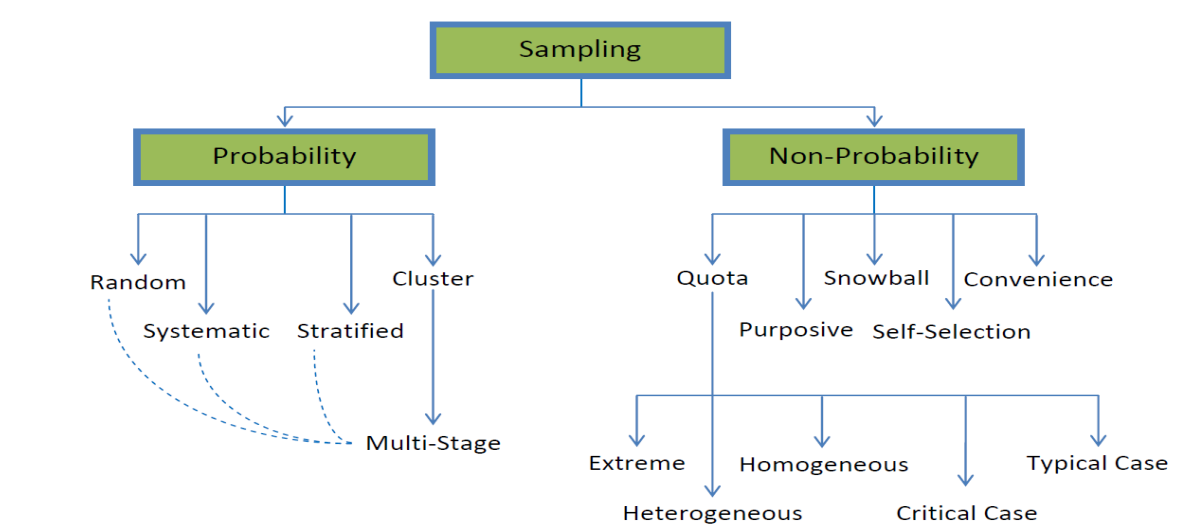
about the relationship between a sample and the population, which allows the researcher to make firm judgement about the relationship between characteristics of a sample and the population (Easterby-Smith et al., 2012).

Random sampling is defined by Greener (2011: 202) as *“a sampling process which attempts to be representative of the wider population by everyone within the group having an equal chance of being chosen”*. Random sampling is used when the population is relatively homogenous with respect to the research questions (Gray, 2014). In random sampling, a researcher includes all members of the population and selects a sample of them in a random process so as to remove bias. According to Gill and Johnson (2010), another aim of random sampling is the generalisability of the finding through ensuring that the participants are a representative subset of the research population. As indicated by Greener (2011: 202), in stratified sampling, *“the population is split into groups that may be representative of it according to a theory being tested (e.g. class, gender, ethnicity) and participants chosen randomly within them”*. An advantage of stratified sampling is that it increases the key groups in the sample while ensuring random selection (Gray, 2014). Cluster sampling acknowledges the difficulty in sampling a population as a whole and choosing a large number of small clustering units is preferable to a small number of large units. Hair et al. (2007) point out that, in cluster sampling, the target population is viewed as made up of heterogeneous groups or clusters.

Non-probability sampling designs such as convenience sampling involve selecting sample units on the basis of how easily accessible these samples are (Easterby-

Smith et al., 2012). In quota sampling, which is similar to stratified random sampling, non-random sampling methods are used to gather data through dividing the relevant population into categories and then selecting a specific size of a sample within each category. Purposive samples are used when the researcher has a clear idea of what sample units are needed and when particular people or settings are known to provide important information that cannot be gained otherwise.

Figure 4.3 Common sampling techniques and types



Source: Saunders, et al. (2009:213)

According to Greener (2011:51), *“The sampling method chosen for a project is appropriate to the goals of the research.”* For this research, samples involve DED employees from different departments. The random sampling is deemed to be in line with the objectives of this study. Levy and Lemeshow (2011) assert that

differentiation between sampling methods is based on the aim of the research. The sampling size for the quantitative questionnaire for this study is as follows:

Organisation	Total Population	Number of questionnaires distributed	Number of questionnaires incomplete	Number of questionnaires valid for analysis	Response rate
ADPD	36000	500	104	396	79.2

The sample was determined by using Yamane's (1967) formula: According to Yamane (1967), **n** is the sample size, **N** is the population size, and **e** is the level of precision.

$$n = \frac{N}{1 + N(e)^2}$$

As can be seen from the table above, therefore, 500 questionnaires were administered and 396 was the number of questionnaires valid for SPSS analysis. Respondents were selected utilising the stratified sampling method as the researcher aimed to include employees from all the HR divisions within the organisation, currently working at various levels, so that more holistic data could be obtained. The response rate for the selected sample was 79.2 %.

4.17.1 Sampling size and profile of interviewees

Eight face-to-face semi-structured interviews were conducted with senior managers at ADPD HR. All of them declined the request to record the interview so

the researcher took extensive notes and organised them in such a way that would simplify the analysis process. Each interview took approximately 45 minutes and the interviews were conducted during the period September – December 2016.

Table 4.18 Interviewees' profiles

	Gender	Age	Dept .	Position	Level of Education	No of years in ADPD
1	Male	53	HR	General Manager	Bachelor	36
2	Male	48	HR	Deputy General Manager	Bachelor	29
3	Male	45	HR	Recruitment and Selection Department Manager	Masters	26
4	Male	46	HR	Training Department. Manager	Masters	24
5	Male	45	HR	Planning Department. Manager	Masters	25
6	Male	44	HR	Education Department. Manager	Masters	24
7	Male	45	HR	School Department. Manager	Bachelor	22
8	Male	41	HR	Personal Affairs Department. Manager	PhD	24

4.18 Pilot study

The purpose of this study is to investigate and evaluate the impact of implementing e-HRM in ADPD in UAE, focusing on the key drivers and barriers. The study also examines best practices of technology utilisation in HRM at government and ,

departments. Therefore, the population of this study involves the employees of Abu Dhabi , department. The sample will be selected based on one criteria for recruiting eligible sample subjects: The participants should be employees who work in the HR departments. Quantitative data will be collected from a convenience sample of Abu Dhabi , department's employees where gender will act as the representative sample. In the population, 20% are females and 80% males. The population size is 36,000, representing the number of employees in Abu Dhabi , Department. The size of the sample (396) has been determined using Yamane's formula, so the representative sample (number of males and females) will be approximately 320/80. The questionnaire will be developed in order to ascertain the implications of the implementation of e-HRM in the Abu Dhabi , department. All the questions are informed by the literature and are in line with the objectives of the research.

4.18.1 Pilot testing for this study

Before distribution on the full-scale data collection, the researcher implemented pilot testing on the questionnaire. This was performed in order to find any errors or difficulties that might have been introduced in the development phase (Bryman and Bell, 2011). They further suggest that this step enables the researcher to avoid any ambiguous wording or misunderstood instructions. According to Saunders et al. (2009), it is essential to test the questionnaire before implementing the formal data collection. The main goal of the pilot study is to make sure that respondents do not face any difficulties in answering questions and obtain early indications of reliability

for instruments to be used. Pilot testing the questionnaire helps in confirming that the research instrument's validity and reliability is at an acceptable level, which in turn promises that this instrument will work well in the full scale data collection phase (Saunders et al., 2009; Bryman and Bell, 2011). It also establishes early indications of reliability through Cronbach's Alpha.

The sample size of the pilot study was 177 employees at ADPD. Although it was large for a pilot study, it covered a wide range of employees at different levels at ADPD which the researcher believes is essential for examining outcomes in the next stages.

4.18.2 Data collection for the pilot study

A questionnaire was designed in order to identify the critical factors influencing the adoption and implementation of e-HRM at ADPD. The questionnaire was informed by the broad literature on e-HRM literature including barriers and challenges for this development (Ababneh and Chhinzer, 2014).

4.18.3 Questionnaire formulation

The questionnaire was developed based upon related literature and modified by reviewing previously validated questionnaires. The questionnaire contains detailed brief and clear instructions, and is arranged to ease the response (AlKhouri, 2012).

The questionnaire has been initially formulated in English and then translated into Arabic to make it accessible for ADPD respondents. Respondents were advised by letter about the nature of the research, the researcher's background, and why the survey is being conducted. They were assured of privacy and confidentiality and were offered the opportunity to receive a copy of the research upon its completion. In addition, they were informed that 15 to 20 minutes was the maximum time they would need to complete it. A five point "Likert" scale was the main instrument in the questionnaire to explore participant's agreement or disagreement with the statements (Nachmias and Nachmias, 1996). Clear, concise instructions were provided for all sections. The arrangement and length followed the suggestions of Saunders et al, (2009) that a longer and more detailed survey/ questionnaire could be used when the population was much specialized in the topic. As was suggested by Bryman and Bell (2011), the shorter and most straightforward questions were placed at the beginning of the questionnaire. The questionnaire was structured with a variety of response opportunities, and was arranged as follows:

Section 1: General Information: this required answers to demographic questions and very general organisational background in box ticking-list.

Section 2: Transition from HRM to e-HRM: Critical factors related to the adoption and implementation of e-HRM at Abu Dhabi , Department. This includes readiness, general acceptance, change management strategy, and needed infrastructure. A scale of 1- 5 has been used, where 1= strong disagreement, and 5 = strong agreement.

Section 3: Barriers to implementing e-HRM at ADPD: A scale of 1-5 has been used in this section as well. Questions on technical capability, technical infrastructure, change management resistance, and adequate number of staff have been discussed in this section.

In all cases, a rating of 3 indicated a neutral position. Finally, an open ended question was asked for the critical factors related to technology implementation and adoption at e-HRM at ADPD.

4.18.4 Descriptive statistics for the piloted study

This section presents the descriptive statistics gathered from Part 1 (background and demographic information) of the questionnaire. The purpose of the descriptive statistics at this stage of the study is to generate a profile data of the respondents. Respondents were involved in a pilot of the current research's main instrument (questionnaire). From the distributed questionnaire, each question has some excluded answers. The results drawn from the collected demographic data are described in the following points and Chapter 5:

- The analysis of gender profiling of the piloted sample shows that males comprise 73% while the remaining 27% are females. The researcher found that this result reflects the overall gender diversity of the workforce in the Abu Dhabi region of the United Arab Emirates which is 71% and 29% for males and females respectively (Lanvin, and Rodriguez. 2015)

- The majority of participants are 21- 30 years old (47%), followed by 31- 40 years old (40%). This result reflects the reality of Emirati youth.
- In terms of educational levels, the respondents' educational profiles indicate that the largest group of participants comprises those with a Bachelor degree (42%) followed by Masters degree holders (40%). The two groups together (Bachelor and Masters degree holders) constitute about 82% of the total respondents. The implication is that majority of the respondents are well educated. This result is understandable as most government employees are well educated in general (Lanvin and Rodriguez, 2015).
- The pilot study revealed that 56% of valid responses are represented by HR department employees, followed by 25% of the Operations department. This is reasonable as this research mainly focuses on HR activities at Abu Dhabi , Department.

4.18.5 Respondents' feedback from the Pilot Test

The feedback was positive as the majority of the participants agreed that the questionnaire was clear; however some respondents highlighted a number of points for improvement, resulting in the following minor adjustments:

1. It was noted that some reviewers felt that the questionnaire should be shorter. This feedback was taken into account and as a result some questions that seemed repetitive or overlapping were deleted.
2. The wording of a few sentences was made clearer.

4.19 Access/Reliability/Validity/Generalisability/Ethics

4.19.1 Access

The researcher was granted permission from the ADPD management to access the data and resources within the various departments, as the findings of this study have practical implications and may be beneficial for the organisation.

4.19.2 Validity

According to Burns and Grove (2001), in research, validity is labelled as a calculation of whether or not the data obtained is true or false. Validity is categorised as either internal or external as an instrument of measuring data. On the other hand, reliability can be defined as the degree in which independent administration of similar interest agrees with results that are alike under conditions that are comparable (De Vos, et al. 1998). According to Polit and Hungler (1999), there exists a relation between validity and reliability. A tool that is not valid cannot be reliable. The research is based in Abu Dhabi; the questions from the interview were both in Arabic and English. There were two professional translators who

supported the translation and verification of the questionnaires. The original questionnaire and the semi structured interview questions had been tested and evaluated by several academic research professionals both in Liverpool John Moores University, UK (LJMU) and Abu Dhabi to make sure there was significant coverage and a robust structure. For the questionnaires and semi structured interviews, first there was a pilot survey to ensure that the questions were understood by the respondents. The interviews themes/questions are semi structured and were based on the literature review and reference frame to ensure validity. The researcher ensured avoidance of leading and subjective questions for both questionnaire and semi structured interviews. All respondents were given an information sheet so that they could better identify with the research objectives. A consistent procedure for recording, writing and interpreting the data acquired was used, alongside adaptation of data and application of both qualitative data and methodological triangulation, in order that the reliability was increased. According to Kumar (2014), research validity is the degree of precision to which the researcher measures what he/ she sets out to measure. Thus, validity answers the question as to whether the actual measurement corresponds to the intended measurement. Validity can be viewed from two dimensions – internal and external. Internal validity ensures that the researcher investigates what he/ she claims to be investigating. On the other, hand, external validity is the extent to which the research findings can be generalised to a wider population (Kumar, 2014). To determine the validity of a data collection method, various types of validity tests are available such as face and content, concurrent and predictive, and construct validity (Bryman and Ball, 2007). However, the most common type is face and

content validity. Content validity refers to the degree of adequacy with which the research instrument covers all aspects of the intended research concepts (Saunders et al., 2009; Sekaran, 2003). In similar terms, content validity refers to the extent to which all sides of a given research construct are represented by questions in the research instrument. A number of ways can enhance content validity of a given research questionnaire: first, carefully outlining the research topic through comprehensive review of the related literature. Second, using a panel of experienced individuals who are able to judge the extent to which the instrument's questions are adequate to measure the intended concept. Finally, allowing comments and suggestions to be made by others through pre-testing the instrument (Saunders et al., 2009). To ensure the current research instrument validity in general, and content validity in particular, the following steps were taken:

- The development of the research instrument was based on the related literature review and previously validated questionnaires.
- A panel of five experienced individuals (two research experts from LJMU and three senior public officers at Abu Dhabi , Department) have reviewed the questionnaire. Suggestions and recommendations provided by the experts were incorporated.
- Back translation method were employed in order to translate the questionnaire into Arabic without any significant variations from the original English version. Professionals were hired for this job.

4.19.3 Reliability

Reliability is the ability to produce consistent measurements each time (Kumar, 2014). That is, if research findings is able to replicate itself over a number of times or when the research is conducted again. In general, a number of reliability tests are usually employed in order to confirm the consistency of an instrument's output. Nevertheless, among the academics, the most widely held method for measuring reliability is the internal consistency method which can be examined through the inter-item consistency reliability test. According to Sekaran (2003), the internal consistency of a measure is suggestive of the consistency of the construct's items and how these items correlate with one another. To guarantee reliability of data in this proposed study, a number of procedures were put into practice. Quantitative data in a structured questionnaire design was based on related literature and earlier validated instruments. These instruments had been tested for reliability using Cronbach's alpha.

Cronbach's alpha coefficient is considered the most frequently used test of inter-item consistency reliability (Saunders et al, 2009). In general, higher coefficients (closer to 1) indicate better inter-item reliability that implicitly leads to a better measurement instrument. However, instruments with coefficients less than 0.6 are viewed to have poor reliability (Tashakkori and Teddle, 2003; Sekaran, 2003). In order to assess the internal consistency of the measures' items in the

questionnaire (all scale measures), Cronbach's alpha test was carried out by running the data using IBM SPSS version 21.

As can be seen from table 4.19 Cronbach's alpha is over 0.95 for all questions/ constructs in the questionnaire which means reliability is accepted at this stage in the research.

Table 4.19: Cronbach's Alpha

No	Construct	No/Items	Cronbach's alpha	Comments
1	All Questions	37	0.964	Accepted
2	Transition into eHRM	19	0.951	Accepted
3	Barriers of implementing eHRM	18	0.960	Accepted

4.20 Data Analysis

Despite the use of data collection, an essential aspect that also exists in this study is data analysis. In conformity to Miles and Huberman, (1994), there exists three steps in data analysis; data reduction, data display and conclusion confirmation to be precise. Data reduction is supportive in sharpening data. Data display aids in putting the data in a further solid, planned format. This directs to the conclusions, which are the findings of the researcher. After the data had been collected, it will be presented and evaluated using a consequential approach. The data at the opening stage of the research is quantitative and evaluated by use of SPSS 21

software; it is intended that a number of bivariate and multivariate techniques will be utilised. For qualitative data, Nvivo10 software will be used for constructing themes and modelling the acquired data from semi-structured interviews and associated qualitative data (policy documents, relevant literature). This software is useful as it assists to develop themes and contrast different participants and emerging themes.

4.21 Generalisability

Generalisability is a feature of research findings that can be applied to other conditions and other populations (Robson, 2002). In other words, generalisability illustrates the extent to which research findings can be applied to settings other than that in which they were originally tested. To represent the population accurately, a maximum sample needs to be obtained depending upon the nature of the problem (Kumar, 2005). In terms of this research, it focuses on one organisation, the ADPD which is a public government entity in the United Arab Emirates, and it is likely that key e-HRM implementation strategy will benefit other UAE government entities which could enhance the generalisability of the study.

4.22 Ethical Considerations

Ethical considerations must be taken into account for any research situation (Grinnell and Unrau, 2008), especially in collecting data from participants (Bryman and Bell, 2007). According to Punch (2006: 56) *“All research has ethical*

dimensions". Today's society is going through a time of profound change in our understanding of the ethics of applied social research (Brown, 2012). Business and management research is looked at from two dominant philosophical viewpoints: deontological and teleological (Cresswell, 2009). The deontological viewpoint suggests that the potential benefits gained through conducting research can never attempt to justify the use of the methods which may be in any way immoral or unethical.

This study received ethical approval and adhered to the ethical research procedures of the ethical guidelines of the Research Ethics Committee [REC] of LJMU (Young, 2006). The procedures followed in this research can be summarised as follows:

- Participants were given the option of participating or not participating in the research.
- Written or verbal consent was sought prior to involvement in the research
- All participants were made fully aware of the requirements for involvement in the research.
- All participants were informed of the nature of the research.
- All participants were given the option to withdraw from the research at any time.

4.23 Chapter summary

This chapter discussed the research methodology and methods adopted by this study and analysed and compared the quantitative and qualitative approaches employed. It also defined and justified the research philosophy. This chapter discussed the advantages and disadvantages of the two methods and the development of the questionnaire, which is supported by semi-structured interviews. The study took a predominantly positivist stance but in order to answer the research objectives and address the nature of the problem, both quantitative and qualitative techniques were used. Quantitative data were collected through questionnaires involving employees at ADPD. This was supported by qualitative data using semi-structured interviews with senior management. It has also examined the statistical techniques utilised in this study to analyse data collected by the questionnaires and semi-structured interviews. Data gathered from these methods will be analysed in the next chapter. Therefore, the research is conducted with the understanding that meaning is interpreted through language and this leads to a reality that is socially constructed rather than a reality that exists outside the meanings that those involved in the research process attribute to it (Saunders, 2012).

CHAPTER FIVE

DATA ANALYSIS AND DISCUSSION

5.1 Introduction

This chapter presents and interprets the results of the study on the importance and benefits of implementing e-HRM within a public sector organisation, namely Abu Dhabi , Department (ADPD), in line with the research objectives of this study. This study aims to examine the advantages of implementing e-HRM within ADPD. It seeks to determine whether Abu Dhabi's , Department is ready for change in a dynamic way by adopting electronic Human Resource Management (e-HRM). The chapter is organised in order to 1) analyse the current problems and challenges impeding the implementation of e-HRM at AD , Department. 2) examine the benefits and success factors for implementing e-HRM in Abu Dhabi , Department. 3) gauge the views and perceptions of ADPD's management on the drivers, barriers and enablers of e-HRM and 4) determine whether western e-HRM models can be implemented in UAE settings, in particular ADPD. Accordingly, the chapter is structured into the following sections (1) profile of the respondents; (2) transition from HRM to e-HRM; (3) challenges of technology resources/facilities; (4) barriers to implementing e-HRM; (5) staff readiness and empowerment for e-HRM and (6) key issues that affect the implementation of the e-HRM system.

5.2 Quantitative data analysis

5.2.1 Descriptive statistical analysis and Cronbach's Coefficient Alpha test

The motivation behind conducting a Skewness and Kurtosis analysis is to present two methods of measuring the normality of distribution of values (Creswell 2009). For the purpose of this current study, there are three categories where the Skewness and Kurtosis did not fall between the ± 1 . Therefore, for the purpose of the analysis, it was assumed that the data had been entered incorrectly and was therefore changed to missing data. This action brought the Kurtosis and Skewness score within acceptable tolerance levels. In addition, the Cronbach Coefficient Alpha reliability test was 0.921 (Table 5.1). This result shows that the reliability is above 0.70, which means there is good consistency in the scale data (Brace et al. 2012). It can therefore be assumed from the results that further parametric and non-parametric analysis can now be conducted.

Table 5.1 - Reliability Test

Cronbach's Alpha	No. of Items
.921	38

The following section presents an overview of the personal and professional attributes of the respondents which are relatively important in the study because these served as mediating variables in assessing the perceived challenges and

constraints of implementing e-HRM at ADPD. The greatest chance for success for implementing e-HRM is the readiness and development of the human capital.

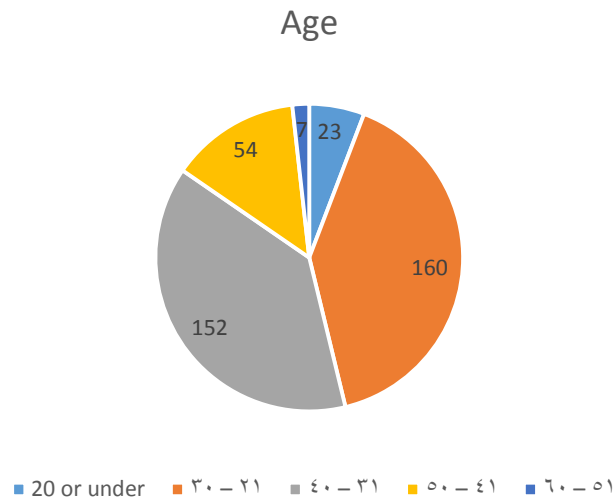
Gender. Table 5.2 shows the distribution of male and female respondents in the study sample. Out of the 396 respondents who indicated their gender, 32.3% are females and 67.7% are male. The male /female ratio indicates twice as many males as females within ADPD which is to be expected given the influence of culture which is conservative in nature. The distribution of the respondents in the sample approximates to the gender balance of internal stakeholders within the organisation as a whole.

Table 5.22 - Gender of participants

		Frequency	Percentage	Valid Percent	Cumulative Percentage
Valid	Female	128	32.3	32.3	32.3
	Male	268	67.7	67.7	100.0
	Total	396	100.0	100.0	

Respondents' Ages. The respondents demonstrated a diversity of ages with 21 - 40 being the modal age level. Figure 5.1 shows that of a total of 396 respondents who indicated their ages, 5.8% belonged to the under 20 year old age group; 40.4% are 21 - 30 years of age; 38.4% are between 31 and 40 years old; 13.6% are aged between 41 – 50 and only 1.8% are aged between 51 - 60 year olds.

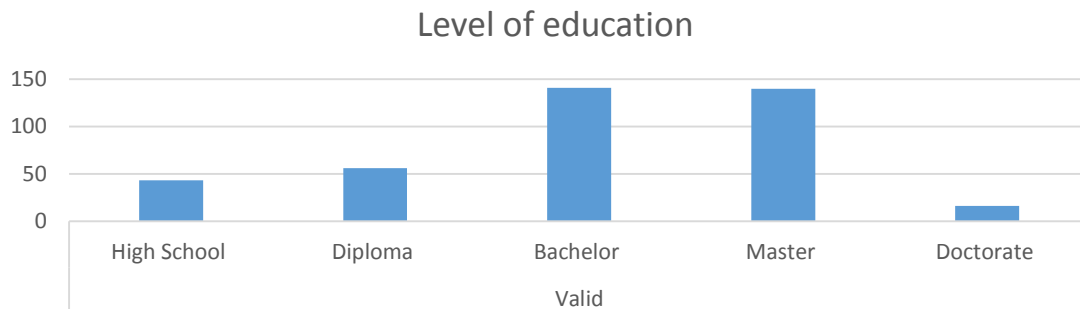
Figure 5.1. Distribution of Respondents According to Age



The modal age of the respondents falls within the modal age level of the participants from Abu Dhabi is 38 years old.

Respondents' levels of education. Figure 5.2 shows that the level of education which returned the highest responses were Bachelor and Masters and were the modal level of qualifications at the AD , Department among the 396 respondents who indicated their level of education. Accordingly, 71% of the respondents are in this education bracket; 10.9% have an education level of High School; 14.1% have a diploma degree and 4% are at doctorate level.

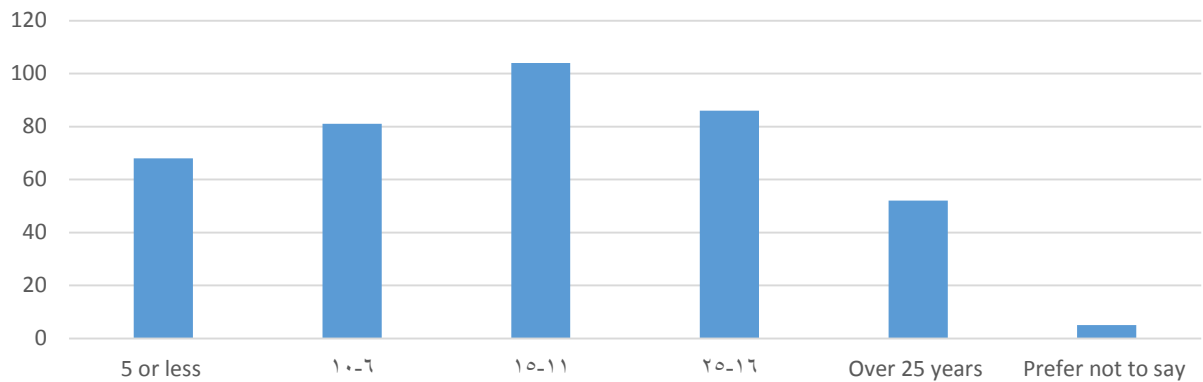
Figure 5.2 Distribution of Respondents according to their level of education



Based on the foregoing demographics, the typical profile of the respondent in the study is a male participant between the ages of 21 to 40 who has either a Masters or Bachelor degree.

Respondents total years of service in the AD , department. Figure 5.3 shows that 11 to 15 years was the modal number of years of service at the AD department among the 396 respondents who indicated their length of service. Accordingly, there are 26.3% of the respondents in this experience bracket; 17.2% with service of five years or less; 20.5% with service of six to ten years; 21.7% of respondents had sixteen to twenty five years of service; 13.1% of respondents have been in the AD , department for over twenty five years and finally 1.3% of the respondents selected the option 'prefer not to say'.

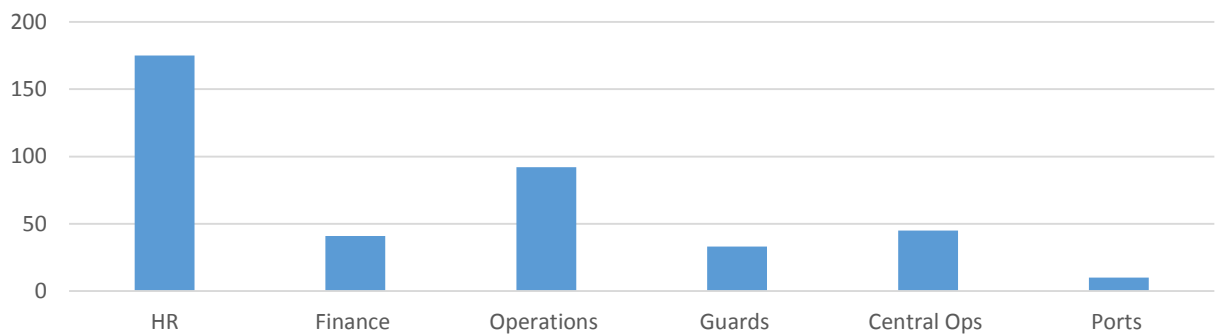
Figure 5.3 Distribution of Respondents according to years of service



Therefore, the data show that the majority of the respondents have served in the AD , department for over six years, suggesting there is a level of loyalty to the organisation.

Respondents' departments. The respondents in Figure 5.4 selected their department within AD ,.

Figure 5.4 Respondent's department



The department with the highest percentage of responses was HR with 175 employees (44.2%). Operations were the second highest responders with 92 employees (23.2%). The remaining groups equated to 32.6% across the remaining four departments.

Differences in the Familiarity with e-HRM plans among the Respondents. This section presents the differences in the extent of familiarity of the respondents with plans for e-HRM when grouped according to gender, age, department, and years of service and level of education.

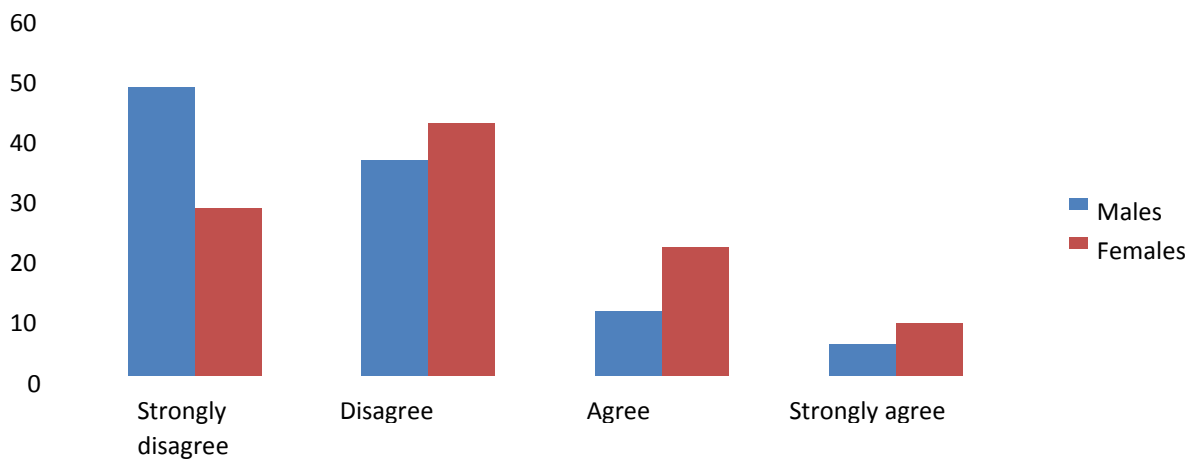
Gender. Table 5.3 shows the perceptions of male and female respondents regarding the transition from HRM to e-HRM. Accordingly, the two highest and two lowest percentages were extrapolated from the main findings. These findings indicate that there are more males (48.1%) compared to females (27.8%) who believe that management is committed to implementing e-HRM. Among the respondents, 42.1% of females claimed that management supports the implementation of e-HRM compared to males (35.9%). For those who did not believe that the management were capable of implementing e-HRM systems, 21.4% of females and 10.7% of males maintained that they did not have confidence in the implementation. However, only 8.7% of the females and 5.3% of the males claimed that their department has a clear, comprehensive vision to implement e-HRM systems.

Table 5.3 Transition from HRM to e-HRM

<u>Transition from HRM to E-HRM</u>	%Males	%Females
Strongly Disagree	48.1	27.8
Disagree	35.9	42.1
Agree	10.7	21.4
Strongly Agree	5.3	8.7

The comparative percentage of respondents' perceptions relative to the transition from HRM to e-HRM according to gender is shown in the following figure:

Figure 5.5. Transition from HRM to e-HRM



To determine the difference in the observed percentages between males and females relative to their knowledge of the challenges of technology resources and facilities, the Chi-square test was used. Accordingly, the results in Table 5.4

revealed that there is a significant difference in the familiarity of males and females regarding their understanding: $\chi^2 = 13.466$, $p = .004 < p = 0.05$. The relationship between gender and familiarity with their knowledge was significant, with males being more knowledgeable compared to females, hence the null hypothesis that there is no significant difference.

Table 5.4. Transition from HRM to e-HRM

	(2-sided)	Value	df	Asymp. Sig.
	Pearson Chi-Square	13.279 ^a	3	0.004
	Likelihood Ratio	13.466	3	0.004
Association		11.242	1	.001

Age. In this regard, the respondents were classified into the following age groups: 20 years or under, 21 to 30 years, 31 to 40 years, 41 to 50 years, and 51 to 60 years. Table 5.5 shows the familiarity of the respondents, when separated into age groups within AD , department, of the challenges of technology resources and facilities. Accordingly, 75% of the respondents who are 41 to 50 years old and above perceived that their IT infrastructure is ready for the implementation of e-HRM. Half of the respondents who are 31 – 40 and 51 – 60 years old (50%) also reported that they felt the IT infrastructure was ready followed by those who are 21 to 30 years old (39.6%) and those under 20 years old (22.2%). For the respondents who know little about the challenges, 42.9% were in the under 20 age

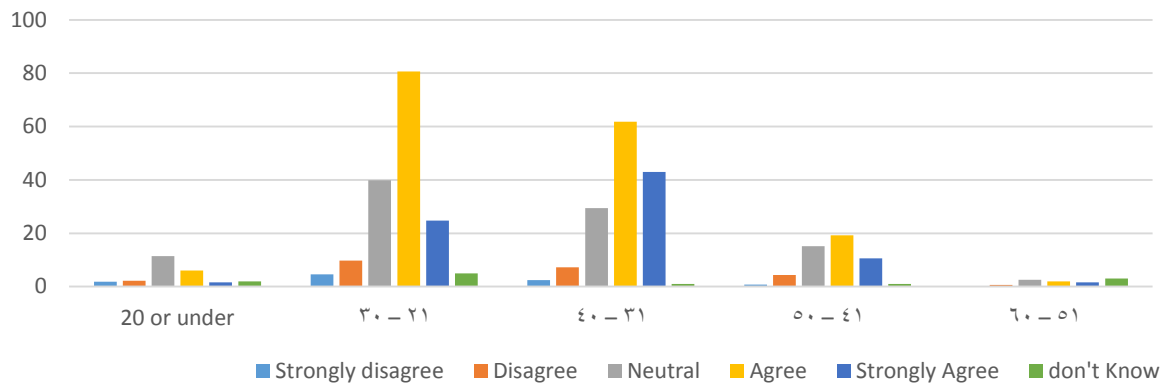
group, 38.1% were between 21 to 30 years of age, 37.5% were between 31 to 40 years old and 25% and 35.5% were aged between 41 to 50 and 51 to 60 respectively.

Table 5. 5. Challenges of technology resources and facilities according to age

	20 and under	21 - 30	31 - 40	41 - 50	51 - 60
Strongly Disagree	22.2	39.6	50	75	50
Disagree	42.9	38.1	37.5	25	35.5
Agree	20.6	17.2	8.9	0	8.6
Strongly Agree	14.3	5.1	3.6	0	5.9
%	100	100	100	100	100
Agreement					

The questionnaire statements from the AD , department regarding, challenges of technology resources and facilities 20.6% who were under 20 years old reported that they felt there would be strong challenges ahead. This is followed by 17.2% in the 21 - 30 age bracket and 8.9% of respondents aged 31 – 40, 14.3% of the respondents were in the under 20 year-old age group, whilst 5.1% were in the 21 to 30 age bracket and 3.6% in the 31 to 40 age group.

Figure 5.6. Challenges of technology resources and facilities - according to age



The trend from the questionnaire indicated that the respondents were in agreement within AD , department for the statement of challenges of technology which is presented in Figure 5.6. It can be observed that the percentage of respondents who agreed that IT infrastructure is ready increased in line with their age up to 40 years old while those who did not agree with this statement gradually decreased according to the age of the respondents

To test whether the AD , department and the challenges of technology resources and facilities according to age was statistically significant or not, the Chi-square test was used. Accordingly, the results showed that the relationship between age and the organisation, regarding the challenges faced with resources and facilities was significant: $\chi^2 = 18.209$, $p = .033 < p = 0.05$. The null hypotheses that there is

no significant difference in the respondents according to age is therefore not maintained.

Table 5.6. Challenges of technology resources and facilities according to gender

	(2-sided)	Value	df	Asymp. Sig.
	Pearson Chi-Square	18.209 ^a	9	0.033
	Likelihood Ratio	18.798	9	0.027
Association		15.922	1	0

Table 5.7 shows the barriers to implementing e-HRM processes and plans according to the organisation. For those who work in the HR department within AD , department, 62.4% among them strongly disagreed that top management had shown support and commitment for the implementation of e-HRM and 25% disagreed. Only 6.3% had either agreed or strongly agreed with the statement.

Among those who worked in the operations department, 39.4% of the respondents strongly disagreed while 42.4% disagreed with the statement. A minority of respondents comprising 12.1% had agreed while 6.1% strongly agreed with their readiness decision making process and plans.

Table 5.7 Barriers to implementing e-HRM

	HR	Operations
Strongly Disagree	62.4	39.4
Disagree	25	42.4

Agree	6.3	12.1
Strongly Agree	6.3	6.1
%	100	100
Agreement		

To measure the difference in barriers to implementing E-HRM within the organisation, the Chi-square test was used.

Table 5.8. Barriers to implementing e-HRM

	(2-sided)	Value	df	Asymp. Sig.
	Pearson Chi-Square	12.950 ^a	18	0.795
	Likelihood Ratio	13.529	18	0.759
Association		2.436	1	.119

Table 5.8 shows that there is significant difference in the barriers to implementing e-HRM and plans according to the AD , department: $\chi^2 = 12.950$, $p = .795$ $p > .05$. This result indicated that this was not a factor in the barriers to implementing e-HRM. The distribution of percentage of the respondents regarding the barriers to implementing e-HRM within the organisation was not statistically different.

Years of service - Table 9 shows the staff readiness and empowerment for E-HRM of the respondents according to years of service. Years of service refers to the number of years that the respondents served in the AD , department, therefore,

the respondents were classified into 5 years or less, 6 to 10 years, 11 - 15 years, 16 – 25 years and those over 25 years of service

Table 5.9. Staff readiness and empowerment for e-HRM – Total years of service

	5 or less	6 - 10	11 - 15	16 - 25	over 25
Strongly disagree	19.3	41	34.7	53.1	52.3
Disagree	42.1	40	42.9	37.5	38.6
Agree	24.6	13.3	16.3	4.2	4.9
Strongly agree	14	5.7	6.1	5.2	4.2
% Agreement	100	100	100	100	100

Among the respondents with under five years of service, 19.3% reported that they strongly disagreed with the statements of Staff Readiness and empowerment for e-HRM while 42.1% disagreed. Among those who felt that the reasons, outcomes and benefits of implementing e-HRM are not well explained, 24.6% maintained that they agreed with the statement and 14% strongly agreed. For the respondents with 6 to 10 years of experience, 41% strongly disagreed while 40% disagreed

For the remaining respondents regarding work experience level, 13.3% agreed and 5.7% strongly agreed. Among the respondents with 11 to 14 years of experience, 34.7% of them strongly disagreed while 42.9% disagreed with the statements of

staff readiness and empowerment for e-HRM. At this same level of experience, 16.3% agreed and 6.1% strongly agreed. For those who had more than 16 to 25 years of experience, 53.1% and 52.3% strongly disagreed whilst 37.5% and 38.6% only disagreed. The remaining 4.2% and 4.9% agreed with this statement, whereas 5.2% and 4.2% strongly agreed.

To test the difference whether work experience influenced the respondents' agreement with staff readiness and empowerment for e-HRM, the Chi-square test was used.

Table 5.10 Staff Readiness and empowerment for e-HRM

	(2-sided)	Value	df	Asymp. Sig.
	Pearson Chi-Square	44.381 ^a	12	.000
	Likelihood Ratio	50.600	12	.000
Association		23.306	1	.000

Accordingly, the results showed that there was a significant difference in the staff readiness and empowerment for e-HRM with years of service: $\chi^2 = 44.381$, $p = .000 < p = 0.05$. The relationship between years of service and staff readiness and empowerment for e-HRM was significant. Years of service was a discriminating factor for the respondents' understanding of staff readiness and empowerment for e-HRM. The null hypothesis indicates that there is significant difference in the findings regarding the statement staff readiness and empowerment for e-HRM.

Pearson Correlations

In order to achieve the objectives of the study and understand their relationships, the Pearson Correlation is used. Therefore, the findings are split into five sections: transition from HRM to e-HRM, challenges of technology resources/facilities, barriers to implementing e-HRM, staff readiness and empowerment for e-HRM and key issues that affect the implementation of the e-HRM system. The statistical correlation analysis that has been undertaken to trace the association amongst variables is the Pearson Coefficient Correlation test and as a result, each measure will be discussed separately.

Pearson correlation – Transition from HRM to e-HRM

Table 5.11 - Transition from HRM to e-HRM

Independent Variables	Number	Pearson Correlation	Sig. (2-tailed)
Management is committed to implementing e-HRM and Management supports the implementation of e-HRM.	396	.582	.012
Management is capable of implementing e-HRM systems and Our department has a clear, comprehensive vision to implement e-HRM systems.	396	.398	.002
There is readiness for adopting to e-HRM within our department and There is general acceptance for the transition to e-HRM within our department.	396	.640	.000
Our organisation has put in place regular training programmes for employees to cope with the transition to e-HRM and There is	396	.466	.045

enough human resource to implement e-HRM system.			
An adequate change management strategy is in place for the transformation to e-HRM and Our organisation has an action plan to implement the change during the implementation of e-HRM.	396	.856	.000
There is constant communication through appropriate medium at all levels to ensure implementation of e-HRM is successful and Our organisation has an action plan to implement the change during the implementation of e-HRM.	396	.693	.002
An adequate change management strategy is in place for the transformation to e-HRM and Management is committed to implementing e-HRM.	396	.285	.019
There is sufficient skilled workforce available to implement e-HRM and Our department has a clear, comprehensive vision to implement e-HRM systems.	396	.765	.000
There is readiness for adopting to e-HRM within our department and Management is committed to implementing e-HRM.	396	.231	.000

Table 5.11 indicates that the most important thing to the majority of participants was that *“An adequate change management strategy is in place for the transformation to e-HRM”* and *“Our organisation has an action plan to implement the change during the implementation of E-HRM,”* with a modal average of 4 (agree) in response to the statement. When analysed against the other four statements within the transition from HRM to e-HRM section of the questionnaire, the Pearson Correlation indicated a moderate correlation with the other statements. This indicates that, whilst respondents answered favourably by

agreeing that they believed that the transition from HRM to e-HRM was important within the organisation, the respondents either extremely agreed or agreed with the other statements. The statements that had the second significant difference between responses in this section were the statements, *“There is readiness for adopting to e-HRM within our department”* and *“There is general acceptance for the transition to e-HRM within our department.”* $r = .640$. However, the Pearson Correlation also revealed a positive correlation in responses to the statements *“Our organisation has put in place regular training programmes for employees to cope with the transition to e-HRM”* and *“There are enough human resources to implement an e-HRM system.”* This highlights that these statements were marked as extremely agree or agree by the majority of the respondents.

Pearson correlation – Challenges of technology resources and facilities

Table 5.12 - Challenges of technology resources and facilities

Independent Variables	Number	Pearson Correlation	Sig. (2-tailed)
IT infrastructure is ready for the implementation of e-HRM and IT infrastructure accommodates integration within the organisation to support the change brought by e-HRM.	396	.714	.000
IT infrastructure is ready for the implementation of e-HRM and Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM.	396	.648	.001
IT infrastructure accommodates integration within the organisation to support the change brought by e-HRM and There is a sufficient technological infrastructure within our organisation.	396	.689	.000

There is a sufficient technological infrastructure within our organisation and There is ample availability of internet connection in the Abu Dhabi , Department.	396	.458	.002
There is ample availability of internet connection in the Abu Dhabi , Department and Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM.	396	-.648	.004

The results in Table 5.12 regarding the challenges of technology resources and facilities, show in the responses to the questions, it is apparently equally important to the majority of participants that the organisation understands the challenges of technology resources and facilities that are in place.

These statements all had a positive correlation: *“IT infrastructure is ready for the implementation of e-HRM”* and *“IT infrastructure accommodates integration within the organisation to support the change brought by e-HRM”*; and *“IT infrastructure is ready for the implementation of e-HRM”* and *“Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM”* with a positive Pearson Correlation of $r = .714$ and $r = .648$ respectively. When analysed against the other questions, the Pearson Correlation indicated a single negative correlation against the other statements: *“There is ample availability of internet connection in the Abu Dhabi , Department”* and *“Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM”* ($r = -.648$).

Pearson correlation – Barriers to implementing e-HRM

Table 5.13 - Barriers to implementing e-HRM

Independent Variables	Number	Pearson Correlation	Sig. (2-tailed)
Top management has not shown support/commitment for the implementation of e-HRM and Employee's attitude towards adoption or implementation of e-HRM is not favourable.	396	.499	.000
Top management has not shown support/commitment for the implementation of e-HRM and Change process is highly affected due to lack of readiness for the proposed e-HRM system.	396	.529	.033
Employee's attitude towards adoption or implementation of e-HRM is not favourable and Change process is highly affected due to lack of readiness for the proposed e-HRM system.	396	.693	.002
Employee's attitude towards adoption or implementation of e-HRM is not favourable and The implementation strategy is not very well planned/organised	396	.885	.000
Change process is highly affected due to lack of readiness for the proposed e-HRM system and The goals of the implementation of e-HRM systems are unclear	396	.777	.011
The goals of the implementation of e-HRM systems are unclear and Top management has not shown support/commitment for the implementation of e-HRM	396	.235	.001

The findings from the Abu Dhabi , department showed that there were a total of six correlations in statements relating to the barriers to implementing e-HRM within the AD , department. Within these six correlations, three of the correlations can be identified as showing a moderate correlation between statements (Table 5.13).

The strongest correlation was between the statements "*Employee's attitude*

towards adoption or implementation of e-HRM is not favourable” and “The implementation strategy is not very well planned/organised” ($r = .885$), thus indicating that there is a strong link between the way participants identify barriers. The second highest correlation was between the statements “Change process is highly affected due to lack of readiness for the proposed e-HRM system” and “The goals of the implementation of e-HRM systems are unclear” ($r = .777$). This indicates that the participants were unclear about the implementation of e-HRM. The lowest relationship concerned the statements “The goals of the implementation of e-HRM systems are unclear” and “Top management has not shown support or commitment for the implementation of e-HRM” ($r = .235$). This indicates that although there is a relationship, it is a weak relationship.

Pearson correlation – Staff readiness and empowerment for e-HRM

Table 5.14 - Staff Readiness and empowerment for e-HRM

Independent Variables	Number	Pearson Correlation	Sig. (2-tailed)
People are not consulted on the e-HRM implementation strategy and the reasons, outcomes and benefits of implementing e-HRM are not well explained.	396	.543	.000
People are not consulted on the e-HRM implementation strategy and It is very complex to get specialisation and adequate number of staff.	396	.543	.001
People are not consulted on the e-HRM implementation strategy and Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult	396	.543	.000
The reasons, outcomes and benefits of	396	.663	.000

implementing e-HRM are not well explained and It is very complex to get specialisation and adequate number of staff.			
The reasons, outcomes and benefits of implementing e-HRM are not well explained and Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult.	396	.585	.002
It is very complex to get specialisation and adequate number of staff and Implementation of e-HRM is not compatible with my department's IT infrastructure.	396	.756	.006
It is very complex to get specialisation and adequate number of staff and Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM.	396	.821	.009
Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM and There is insufficient technical capability to implement e-HRM effectively.	396	.478	.044
There is insufficient technical capability to implement e-HRM effectively and People are not consulted on the e-HRM implementation strategy.	396	.452	.022
There is insufficient technical capability to implement e-HRM effectively and the reasons, outcomes and benefits of implementing e-HRM are not well explained.	396	.333	.011
Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM and People are not consulted on the e-HRM implementation strategy.	396	.824	.001
Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM and People are not consulted on the e-HRM implementation strategy.	396	.356	.003

The results in Table 5.14 indicate there were twelve correlations with six statements that were moderate to strong. The six moderate to strong correlations statements were: *“Poor technical infrastructure (e.g. electricity, telephone lines) hinders the implementation of e-HRM”* and *“People are not consulted on the e-HRM implementation strategy”* ($r = .824$); *“It is very complex to get specialisation and adequate number of staff”* and *“Poor technical infrastructure (e.g. electricity, telephone lines) hinders the implementation of e-HRM”* ($r = .824$); *“It is very complex to get specialisation and adequate number of staff”* and *“Implementation of e-HRM is not compatible with my department’s IT infrastructure”* ($r = .756$); *“The reasons, outcomes and benefits of implementing e-HRM are not well explained”* and *“It is very complex to get specialisation and adequate number of staff”* ($r = .663$); *“People are not consulted on the e-HRM implementation strategy”* and *“Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult”*; and *“People are not consulted on the e-HRM implementation strategy”* and *“It is very complex to get specialisation and adequate number of staff”* ($r = .543$). The weakest correlation was between the statements *“Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM”* and *“People are not consulted on the e-HRM implementation strategy”* ($r = .356$).

Pearson correlation – Key issues that affect the implementation of the e-HRM system

Table 5.15 – Key issues that affect the implementation of the e-HRM system

Independent Variables	Number	Pearson Correlation	Sig. (2-
-----------------------	--------	---------------------	----------

			tailed)
Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively and Insufficient and obsolete operational equipment makes it difficult to deliver improved services	396	.459	.003
Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively and Our organisation encounters difficulties when there is a need for coordination with other organisations	396	-.882*	.004
Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively and We face difficulties/delay whenever we try to get necessary data or information from outside the organisation	396	.521	.000
Insufficient and obsolete operational equipment makes it difficult to deliver improved services and Our organisation encounters difficulties when there is a need for coordination with other organisations	396	.699	.002
Insufficient and obsolete operational equipment makes it difficult to deliver improved services and We face difficulties/delay whenever we try to get necessary data or information from outside the organisation	396	.829	.013
Our organisation encounters difficulties when there is a need for coordination with other organisations and We face difficulties/delay whenever we try to get necessary data or information from outside the organisation	396	.343	.000
Our organisation encounter difficulties when there is a need for coordination with other organisations and Insufficient support/assistance from political leadership makes it difficult to carry out organisational development programmes	396	.563	.000
We face difficulties/delay whenever we try to get necessary data or information from outside the organisation and Insufficient support and	396	.640	.003

assistance from political leadership makes it difficult to carry out organisational development programmes			
We face difficulties/delay whenever we try to get necessary data or information from outside the organisation and the e-HRM implementation process is not adequately funded	396	.663	.000
A weak legislative or regulatory framework makes it difficult to implement e-HRM and Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively	396	.585	.012
A weak legislative or regulatory framework makes it difficult to implement e-HRM and Insufficient and obsolete operational equipment makes it difficult to deliver improved services	396	.699	.001
A weak legislative or regulatory framework makes it difficult to implement e-HRM and Our organisation encounters difficulties when there is a need for coordination with other organisations	396	.829	.001
The e-HRM implementation process is not adequately funded and Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively	396	.693	.002
The e-HRM implementation process is not adequately funded and Insufficient and obsolete operational equipment makes it difficult to deliver improved services	396	.285	.019

Table 5.15 indicates that the most important thing to the majority of participants was *“Inadequate technical infrastructure to implement change effectively”* and *“Our organisation encounters difficulties when there is a need for coordination with other organisations”* with a modal average of 4 (agree) in response to the statement.

When analysed against the other fourteen statements within the key issues that

affect the implementation of an e-HRM system section of the questionnaire, the Pearson Correlation indicated a moderate to high correlation with the other statements. This indicates that, whilst respondents answered favourably by agreeing, that they believed that there were key issues that would affect the implementation of e-HRM within the AD , department, and respondents either extremely agreed or agreed with the other statements. The statements that had the joint highest significant difference between responses in this section were the statements: *“A weak legislative or regulatory framework makes it difficult to implement e-HRM”* and *“Our organisation encounters difficulties when there is a need for coordination with other organisations”* ($r = .829$). However, the Pearson Correlation also revealed a positive correlation in responses to the statements *“Insufficient and obsolete operational equipment makes it difficult to deliver improved services”* and *“We face difficulties or delays whenever we try to get necessary data or information from outside the organisation”* ($r = .829$). This highlights that these statements were marked as extremely agree or agree by the majority of the respondents. The weakest correlation was between the statements *“The e-HRM implementation process is not adequately funded”* and *“Insufficient and obsolete operational equipment makes it difficult to deliver improved services”* ($r = .285$).

Independent sample t – test

An independent sample t - test was conducted to identify the differences in mean scores of participants' gender (independent variable) from various dependent

variables taken from the questionnaire. As a result, this test shows significant differences. Furthermore, if the significance level of Levene's t - test is .05 or less, this means that the variances for the two groups for males and females are not the same. Therefore, the data collected will violate the assumption of equal variance. However, SPSS provides an additional statistic that compensates for when variances are not the same, 'equal variances not assumed', which is an alternative t - value. In the case of the Abu Dhabi , department, the gender split was two hundred and sixty-eight males and one hundred and twenty-eight females.

Independent sample t - test – Transition from HRM to e-HRM

Table 5.16 - Independent t - test – Transition from HRM to e-HRM

Levene's Test							
	F	Sig.	T	df	Sig. (2-tailed)	Mean	Std. Error
Management is committed to implementing e-HRM	1.817	.009	3.904	309.315	.000	.34040	.08718
Management supports the implementation of e-HRM			18.220	.000	-3.140	262.771	.002
Management is capable of implementing e-HRM systems			17.967	.000	-6.705	358.464	.000
There is readiness for adopting to e-HRM within our department			14.368	.000	-2.875	344.746	.004

There is general acceptance for the transition to e-HRM within our department	1.362	.000	-2.385	244.746	.018	-.36023	.11353
ADPD has an innovative culture/flexible structure	20.024	.000	2.788	276.560	.001	.37694	.13520
There is sufficient skilled workforce available to implement e-HRM	.184	.668	-6.712	309.013	.000	-.89557	.13344
The need to adopt an e-HRM system is being introduced by top management	64.878	.000	-6.473	382.182	.000	-.81444	.12583
Our organisation has an action plan to implement the change during the implementation of e-HRM	1.668	.197	-3.019	285.270	.003	-.40199	.13317
An adequate change management strategy is in place for the transformation to e-HRM	25.585	.000	-6.302	375.865	.000	-.84181	.13358
There is sufficient skilled workforce available to implement e-HRM	26.456	.000	-3.212	275.870	.001	-.56852	.17698
The need to adopt an e-HRM system is being introduced by top management	2.860	.092	-2.487	329.393	.013	-.34857	.14014

Group Statistics	Gender	N	Mean	Std. Deviation	Std. Error Mean
Management is committed to implementing e-HRM	Male	268	3.4226	.83595	.05407
	Female	128	3.0822	.82635	.06839
Management supports the implementation of e-HRM	Male	268	2.8159	1.05699	.06837
	Female	128	3.2123	1.28229	.10612

Management is capable of implementing e-HRM systems	Male	268	2.6318	1.21890	.07884
	Female	128	3.3836	.96319	.07971
There is readiness for adopting e-HRM within our department	Male	268	4.1071	1.24262	.08038
	Female	128	4.2479	1.05263	.08712
There is general acceptance for the transition to e-HRM within our department	Male	268	3.1071	1.24262	.08038
	Female	128	4.2479	1.05263	.08712
The ADPD has an innovative culture/flexible structure	Male	268	1.8159	1.25699	.07837
	Female	128	3.2123	1.28229	.10612
There is sufficient skilled workforce available to implement e-HRM	Male	268	2.5565	1.27844	.08270
	Female	128	3.4521	1.26536	.10472
The need to adopt an e-HRM system is being introduced by top management	Male	268	3.3431	1.56090	.10097
	Female	128	4.1575	.90735	.07509
Our organisation has an action plan to implement the change during the implementation of e-HRM	Male	268	3.4268	1.19605	.07737
	Female	128	3.8288	1.30970	.10839
An adequate change management strategy is in place for the transformation to e-HRM	Male	268	3.2678	1.53784	.09947
	Female	128	4.1096	1.07718	.08915
There is sufficient skilled workforce available to implement e-HRM	Male	268	2.0753	1.54572	.09998
	Female	128	2.6438	1.76455	.14604
The need to adopt an E-HRM system is being introduced by top management	Male	268	4.0418	1.41359	.09144
	Female	128	3.3904	1.28317	.10620

From the fourteen statements relating to the transition from HRM to e-HRM, twelve statements were statistically significant with respect to gender (Table 5.16) indicates that the t-test is for comparison across gender.), with females returning higher means scores for ten out of the twelve statements. Firstly, the statement

relating to *“Management is committed to implementing e-HRM”* ($t = 3.904$, $df = 309$, $p = .000$) returned a statistically significant difference, with male respondents agreeing more with the statement (3.42) than females (3.08) (Table 5.17). The second statement showing significant differences was, *“Management supports the implementation of E-HRM”* ($t = -3.140$, $df = 262$, $p = .002$) where, females were more in agreement (3.21) compared to their male counterparts (2.81). The results that showed the highest mean was the statement, *“There is a readiness for adopting e-HRM within our department”* ($t = -2.875$, $df = 344$, $p = .004$). This therefore indicates that females believe that the department is ready to adopt e-HRM within AD , department. (4.24) while the males were also of the similar opinion (4.10).

Independent sample t - test –Challenges of technology resources and facilities

Table 5.17 - Independent t - test – Challenges of technology resources and facilities

Levene's Test							
	F	Sig.	t	df	Sig. (2- tailed)	Mean	Std. Error
IT infrastructure is ready for the implementation of e-HRM	24.027	.000	-8.450	352.337	.000	-.94988	.11241
IT infrastructure accommodates integration within the organisation to support the change brought by e-HRM	9.751	.002	-5.724	331.777	.000	-.79710	.13926
There is ample availability of internet connection in	26.295	.000	-3.724	260.892	.000	-.34751	.09331

the ADPD							
Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM	20.024	.000	2.788	276.560	.001	.37694	.13520

Group Statistics	Gender	N	Mean	Std. Deviation	Std. Error Mean
IT infrastructure is ready for the implementation of E-HRM	Male	268	1.9582	1.55782	.10077
	Female	128	1.7534	1.01412	.08393
IT infrastructure accommodates integration within the organisation to support the change brought by e-HRM	Male	268	2.9707	1.49621	.09678
	Female	128	2.6644	1.05880	.08763
There is ample availability of internet connection in the Abu Dhabi , Department	Male	268	1.0946	1.26142	.08159
	Female	128	1.6822	1.11730	.09247
Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM	Male	268	4.6109	.95445	.06174
	Female	128	4.9863	1.07630	.08908

The results in Table 5.17 show that four statements were statistically significant. The four results had varying degrees of significance, with the statement “Our organisation provides all needed hardware and equipment necessary for value creation by E-HRM”. ($t = -2.788$, $df = 276$, $p = .001$) being the highest towards strongly agree. As a result, females (4.98) were higher in agreement than males (4.61) indicating that the participants felt their organisation provides the necessary equipment for creation of E-HRM in general. In addition, for the statement “There is ample availability of internet connection in the Abu Dhabi , Department.” ($t = -$

3.724, $df = 260$, $p = .000$), females showed higher agreement (1.68) in contrast to their male colleagues (1.09) despite both responding towards disagree on the questionnaire. Finally, the statement, "IT infrastructure accommodates integration within the organisation to support the change brought by E-HRM". ($t = -5.724$, $df = 331$, $p = .000$) had males showing a higher level of agreement (2.97) in comparison to females (2.66). In conclusion, the findings suggest that, although participants have some knowledge of the of the challenges with the implementation of e-HRM within the ADPD the belief from the participants suggest that they disagree that AD , department has the necessary IT infrastructure in place in order to make the E-HRM operational.

Independent sample *t* test – Barriers to implementing E-HRM

Table 5.18 - independent *t* - tests – Barriers to implementing e-HRM

Levene's Test							
	F	Sig.	t	df	Sig. (2-tailed)	Mean	Std. Error
Top management has not shown support/commitment for the implementation of e-HRM	2.359	.126	4.197	201.597	.000	.60845	.14496
Employees' attitude towards adoption or implementation of e-HRM is not favourable	.024	.878	3.695	207.630	.000	.40107	.10855
Change process is highly affected due to lack of readiness for the proposed e-HRM system	.030	.864	2.846	228.664	.001	.30487	.10714
The implementation strategy is not very well planned/organised	2.591	.109	2.035	193.003	.003	.25575	.12565
The goals of the	.156	.693	2.079	213.894	.003	.25910	.12465

**implementation of e-HRM
systems are unclear**

Group Statistics	Gender	N	Mean	Std. Dev	Std. Error Mean
Top management has not shown support/commitment for the implementation of E-HRM	Male	268	3.9154	1.01946	.08941
	Female	128	3.3069	1.14667	.11410
Employee's attitude towards adoption or implementation of e-HRM is not favourable	Male	268	3.4308	.78689	.06902
	Female	128	3.0297	.84209	.08379
Change process is highly affected due to lack of readiness for the proposed e-HRM system	Male	268	3.8692	.90123	.07904
	Female	128	3.5644	.72685	.07232
The implementation strategy is not very well planned/organised	Male	268	3.5231	.84647	.07424
	Female	128	4.5248	.71546	.07119
The goals of the implementation of e-HRM systems are unclear	Male	268	3.4769	.93357	.08188
	Female	128	3.2178	.94450	.09398

Table (5.18) shows a higher agreement regarding the barriers to implementing e-HRM within the Abu Dhabi , Department with five of the statements statistically significant. The highest significance was *"The implementation strategy is not very well planned or organised"*. ($t = 2.035$, $df = 193$, $p = .003$). All of the significance levels were at .003 or below. One particular observation is that females are higher in agreement with the statement regarding the implementation strategy not being well planned (4.52). Although, males were also in similar agreement to their female colleagues, with a mean of 3.52. However, with respect to the statement, *"Change process is highly affected due to lack of readiness for the proposed e-HRM system,"* ($t = 2.846$, $df = 228$, $p = .001$), it is evident that males are higher in agreement (3.86) than the females (3.56).

Independent sample *t* test – Staff readiness and empowerment for e-HRM

Table 5.19 - independent *t* - tests – Staff Readiness and empowerment for e-HRM

Levene's Test							
	F	Sig.	t	df	Sig. (2- tailed)	Mean	Std. Error
People are not consulted on the e-HRM implementation strategy	64.878	.000	-6.473	382.182	.000	-.81444	.12583
The reasons, outcomes and benefits of implementing e-HRM are not well explained	1.668	.197	-3.019	285.270	.003	-.40199	.13317
It is very complex to get specialisation and adequate number of staff	25.585	.000	-6.302	375.865	.000	-.84181	.13358
Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult	26.456	.000	-3.212	275.870	.001	-.56852	.17698
Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM	2.860	.092	-2.487	329.393	.001	-.34857	.14014

Implementation of e-HRM is not compatible with my department's IT infrastructure	.420	.517	1.627	281	.005	.16158	.099
---	------	------	-------	-----	------	--------	------

Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM	17.967	.000	-6.705	358.464	.000	-.75176	.11212
--	--------	------	--------	---------	------	---------	--------

There is insufficient technical capability to implement e-HRM effectively	26.295	.000	-3.724	260.892	.000	-.34751	.09331
--	--------	------	--------	---------	------	---------	--------

Group Statistics	Gender	N	Mean	Std. Deviation	Std. Error Mean
People are not consulted on the e-HRM implementation strategy	Male	268	2.5565	1.27844	.08270
	Female	128	3.4521	1.26536	.10472
The reasons, outcomes and benefits of implementing e-HRM are not well explained	Male	268	4.3431	1.56090	.10097
	Female	128	4.1575	.90735	.07509
It is very complex to get specialisation and adequate number of staff	Male	268	3.4268	1.19605	.07737
	Female	128	3.8288	1.30970	.10839
Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult	Male	268	3.2678	1.53784	.09947
	Female	128	4.1096	1.07718	.08915
Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM	Male	268	2.0753	1.54572	.09998
	Female	128	2.6438	1.76455	.14604
Implementation of e-HRM is not compatible with my department's IT infrastructure	Male	268	2.6318	1.21890	.07884
	Female	128	3.3836	.96319	.07971
Poor technical infrastructure (e.g.	Male	268	4.1071	1.24262	.08038

electricity, telephone lines etc.) hinders the implementation of e- HRM	Female	128	4.2479	1.05263	.08712
There is insufficient technical capability to implement e-HRM effectively	Male	268	2.1071	1.24262	.08038
	Female	128	3.2479	1.05263	.08712

The results in Table 5.19 show that nine statements were statistically significant. The eight results had varying degrees of significance, with the statement *“The reasons, outcomes and benefits of implementing E-HRM are not well explained”* ($t = -3.019$, $df = 285$, $p = .003$) being the highest response towards strongly agree. As a result, males (4.34) were higher in agreement than females (4.15) that participants would be ready and empowered for e-HRM. In addition, the above statement is further supported by the statement *“It is very complex to get specialisation and adequate number of staff ”* ($t = -6.302$, $df = 375$, $p = .000$). Females were slightly more positive about the above statement (3.82), compared to males (3.42). Furthermore, regarding the statement *“People are not consulted on the e-HRM implementation strategy.”* ($t = -6.473$, $df = 382$, $p = .000$), females showed higher agreement (3.45) in contrast to their male colleagues (2.55). Finally, the statement, *“Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult”* ($t = 3.212$, $df = 275$, $p = .001$) had males showing less agreement (3.26) in comparison to females (4.10). In conclusion, the findings suggest that, there is uncertainty that the staff are ready and feel empowered about the launch of e-HRM.

Independent sample *t* - test – Key issues that affect the implementation of the e-HRM system

Table 5.20 - independent *t* - tests – Key issues that affect the implementation of the e-HRM system

Levene's Test							
	F	Sig.	T	df	Sig. (2-tailed)	Mean	Std. Error
Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively	.125	.724	-5.431	217.029	.000	-.90152	.16599
Insufficient and obsolete operational equipment makes it difficult to deliver improved services	26.025	.000	-5.607	223.300	.000	-.95842	.17092
We face difficulties/delay whenever we try to get necessary data or information from outside the organization	45.677	.000	-2.278	228.180	.004	-.42003	.18440
The e-HRM implementation process is not adequately funded	46.739	.000	-2.161	260.941	.032	-.31017	.14354
A weak legislative/regulatory framework makes it difficult to implement	32.073	.000	-2.003	243.048	.046	-.21167	.10565

e-HRM

Group Statistics	Gender	N	Mean	Std. Deviation	Std. Error Mean
Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively	Male	268	2.4846	1.26512	.11096
	Female	128	3.3861	1.24073	.12346
Insufficient and obsolete operational equipment makes it difficult to deliver improved services	Male	268	4.2000	1.56215	.13701
	Female	128	4.1584	1.02696	.10219
We face difficulties/delay whenever we try to get necessary data or information from outside the organisation	Male	268	3.8077	1.61915	.14201
	Female	128	4.2277	1.18221	.11763
The e-HRM implementation process is not adequately funded	Male	268	2.6485	1.26769	.08200
	Female	128	2.2877	.99626	.08245
A weak legislative/regulatory framework makes it difficult to implement e-HRM	Male	268	3.1213	1.19432	.07725
	Female	128	3.4315	1.46173	.12097

Table 5.20 presents the following *t* test responses that were obtained relating to the theme of key issues that affect the implementation of the e-HRM system. The statement with the highest mean overall was *“Insufficient and obsolete operational equipment makes it difficult to deliver improved services”* ($t = -5.607$, $df = 223$, $p = 000$). In addition, the gender response showed agreement with the statement for both males (4.20) and females (4.15). The statement, *“We face difficulties or delays whenever we try to get necessary data or information from outside the organisation”*. ($t = -2.278$, $df = 228$, $p = 004$) showed both the males (3.80) and the

females (4.22) agreed, therefore suggesting that participants do feel that there are issues that will cause delays when trying to obtain the relevant data when connecting outside of the AD , department. This is supported by responses to the statement, *“Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively”* ($t = -5.431$, $df = 217$, $p = .000$) which returned a more negative response for males (2.48) and females (3.38).

One–Way Anova Test Involving Means

This part of the study is to investigate the research objectives concerning the current perceptions of Abu Dhabi , department participants. To achieve these objectives and answer them, five target statements were selected. These included the: (1) Transition from HRM to e-HRM, (2) Challenges of technology resources/facilities (3) Barriers to implementing e-HRM, (4) Staff readiness and empowerment for e-HRM and (5) Key issues that affect the implementation of the e-HRM system, to explore whether the Abu Dhabi , Department have the necessary strategies and whether these strategies include an open forum for participants to express their creativity and opinions through the transition of HRM to e-HRM. In conclusion, to answer these objectives, One - way Anova analysis was conducted with a Duncan’s Post Hoc test, which is used to split the groups into homogeneous subsets.

One - Way Anova test – Transition from HRM to e-HRM

Table 5.21 - One - Way Anova – Transition from HRM to E-HRM

		Management is committed to implementing e-HRM	Management supports the implementation of e-HRM	Management is capable of implementing e-HRM systems	There is general acceptance for the transition to e-HRM within our department	Our department has a clear, comprehensive vision to implement e-HRM systems	There is sufficient skilled workforce available to implement e-HRM
Age	N	Mean	Mean	Mean	Mean	Mean	Mean
Under 20	23	3.35	3.32	3.94	3.58	3.39	2.65
21 - 30	160	3.51	3.01	3.49	2.45	4.20	3.71
31 - 40	152	2.41	2.37	3.77	3.29	3.33	3.72
41 - 50	54	4.16	3.77	4.07	2.89	4.23	2.89
51 - 60	7	3.66	2.85	4.01	3.48	4.01	2.84
Total	396	3.41	3.04	3.85	3.14	3.83	3.16
One Way Anova		0.000	0.003	0.001	0.02	0.000	0.002

Table 5.21 shows that there are six out of fourteen statements that are statistically significant. The results show that the 41 - 50 year olds (n = 54) had the highest means across all statements relating to the transition from HRM to e-HRM within the Abu Dhabi , Department. The second highest was the 51 - 60 year olds (n = 7). However, the group with the lowest means across the majority of statements regarding the transition from HRM to e-HRM within the , department were the 31 - 40-year olds (n = 152) and the under 20 year olds (n = 23). The results show that there were statistically significant differences amongst the age groups, which is supported by the results from the One - Way Anova (p = .003 and below .005).

Based on the findings, it can be suggested that the older the participants, the more in agreement they are about the transition from HRM to e-HRM than their younger peers. However, younger participants slightly disagree that this is the case.

One – Way Anova test – Challenges of technology resources and facilities

Table 5.22- Challenges of technology resources and facilities

		IT infrastructure is ready for the implementation of e-HRM	IT infrastructure accommodates integration within the organisation to support the change brought by e-HRM	There is ample availability of internet connection in the Abu Dhabi , Department	Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM
Age	N	Mean	Mean	Mean	Mean
Under 20	23	2.84	4.29	3.19	3.19
21 - 30	160	2.03	3.18	2.32	2.91
31 - 40	152	2.21	2.51	2.24	3.30
41 - 50	54	3.60	4.17	3.79	4.37
51 - 60	7	4.02	3.85	3.25	4.01
Total	396	2.94	3.60	2.96	3.56
One Way Anova		0.000	0.000	0.001	0.000

As can be seen in Table 5.22, four questions regarding the challenges of technology resources and facilities that the respondents experienced within the Abu Dhabi , Department, had significant differences ($p = .001$ or below). The consensus returned an average mean of 3.26 for all statements. The result of the Duncan's Post Hoc test shows that there was significance for the statement, *"IT infrastructure accommodates integration within the organisation to support the change brought by e-HRM"*, with age groups 41 - 50 ($n = 54$) and the 51 - 60 year olds ($n = 7$) with means of 3.60 and 4.02 respectively. Therefore, this indicates that

the older participants think that the AD , department has the necessary infrastructure for implementing e-HRM. As a result, this form of resistance suggests that some participants are unlikely to support the change from HRM to e-HRM.

One – Way Anova test – Barriers to implementing e-HRM

Table 5.23- Barriers to implementing e-HRM

		Top management has not shown support or commitment for the implementation of e-HRM	Employee's attitude towards adoption or implementation of e-HRM is not favourable	The implementation strategy is not very well planned or organised	Change process is highly affected due to lack of readiness for the proposed e-HRM system	The goals of the implementation of e-HRM systems are unclear
Age	N	Mean	Mean	Mean	Mean	Mean
Under 20	23	4.32	2.13	3.10	4.38	2.38
21 - 30	160	2.77	2.55	2.44	4.26	2.26
31 - 40	152	3.06	2.46	2.71	2.02	2.35
41 - 50	54	3.86	2.62	2.64	3.69	2.19
51 - 60	7	3.85	2.58	2.70	4.00	3.02
Total	396	3.52	2.46	2.71	3.87	2.44
One Way Anova		0.000	0.000	0.001	0.000	0.000

The One - Way Anova results reveal that there was a significant difference between the means of the five age groups for Abu Dhabi , Department (p = .001 and below .05). The Duncan Post Hoc test indicates that there is a consensus among the groups towards the statement, *“Employee’s attitude towards adoption or implementation of e-HRM is not favourable”* (2.46). However, the under 20 year olds (n = 23) were less in agreement with this statement (2.13) compared to the other age groups, although the 31 - 40 year olds (n = 152) were statistically

different to the remaining groups with a mean of 2.46. In relation to the statement *“Change process is highly affected due to lack of readiness for the proposed e-HRM system”*, Table 5.23 shows that participants were mainly in agreement (2.87) and the differences were statistically significant ($p = .000$). However, the Duncan Post Hoc test demonstrates that the 31 - 40 year olds were not significant with the other groups (2.02). Therefore, the 31 - 40 year old age group believe that there is little agreement that the AD , department is affected by the lack of readiness for the e-HRM system and the barriers to implementing this system that are currently in place.

One – Way Anova test – Staff readiness and empowerment for e-HRM

Table 5.24 - Staff Readiness and empowerment for e-HRM

		The reasons, outcomes and benefits of implementing e-HRM are not well explained	It is very complex to get specialisation and adequate number of staff	Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult	Implementation of e-HRM is not compatible with my department's IT infrastructure	Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM
Age	N	Mean	Mean	Mean	Mean	Mean
Under 20	23	3.58	2.65	3.02	4.03	2.84
21 - 30	160	2.45	3.71	2.42	4.08	3.42
31 - 40	152	3.29	3.72	3.91	2.95	2.91
41 - 50	54	2.89	2.89	2.58	3.43	2.58
51 - 60	7	3.81	2.58	3.69	3.82	3.49
Total	396	3.10	3.23	3.81	3.65	3.04
One Way Anova		0.013	0.004	0.003	0.000	0.002

There are statistically significant differences amongst the statements surrounding the staff readiness and empowerment for e-HRM ($p = .013$ and below $.005$). As can be identified in Table 5.24 the statement with a strong disagreement across the age groups was *“Poor technical infrastructure (e.g. electricity, telephone lines*

etc) hinders the implementation of e-HRM". (3.04). The 51 - 60 year olds (n =7) had the highest agreement (3.49) compared to the 41 - 50 year olds (n = 54) (2.58). Therefore, as results from the Duncan's Post Hoc Test illustrate, all the age groups were statistically different to the 41 - 50 year olds in relation to this statement. However, the statement *"Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult"* showed that the 31 - 40 year olds (3.91) and the 51 – 60 year olds (3.69) were more in agreement than the other age groups which were significantly different. However, the 21 - 30 year olds (n = 160) (2.42) disagreed that they felt the AD , department had reliable IT in order to make e-HRM work effectively. Therefore, this suggests that there is inconsistency in the significance from the age groups, especially the 21 – 30 year olds who make up 40% of the respondents.

One – Way Anova – Key issues that affect the implementation of the e-HRM system

Table 5.25 - Key issues that affect the implementation of the e-HRM system

		Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively	Insufficient and obsolete operational equipment makes it difficult to deliver improved services	Our organisation encounter difficulties when there is a need for coordination with other organisations	Insufficient support/assistance from political leadership makes it difficult to carry out organisational development programmes	The E-HRM implementation process is not adequately funded
Age	N	Mean	Mean	Mean	Mean	Mean
Under 20	23	3.63	2.75	2.50	4.38	2.84
21 - 30	160	3.59	2.54	3.20	4.26	4.16
31 - 40	152	3.20	2.70	3.74	3.02	3.29
41 - 50	54	2.98	2.10	3.67	3.69	2.77
51 - 60	7	3.35	2.49	3.27	1.83	3.55
Total	396	3.35	2.51	3.27	3.83	3.32

One Way Anova	0.020	0.002	.014	0.000	0.000
----------------------	-------	-------	------	-------	-------

The results of the One - Way Anova for the AD , department shows there were statements with statistical differences amongst the five age groups. Table 5.25 indicates that the significance levels were $<.005$ ($p = .020$ and below $.05$). The statement that had the highest mean was *“Insufficient support or assistance from political leadership makes it difficult to carry out organisational development programmes”* (3.83), with the under 20 year old participants ($n = 23$) returning the highest mean (4.38). However, the Post Hoc test shows that there is a difference between the 51 - 60 year olds ($n = 7$) and the 31 - 40 year olds ($n = 152$) towards this statement, 1.83 and 3.02 respectively, therefore indicating that youngest participants are certain that there is insufficient support by the leaders of the AD , department. The statement *“Insufficient and obsolete operational equipment makes it difficult to deliver improved services”* had the lowest mean score (2.51), with the 41 - 50 year olds ($n = 54$) (2.10) answering differently to the under 20 year olds ($n = 23$) (2.75) and the 31 – 40 year olds ($n = 152$) (2.70). A further statement that showed agree responses was, *“Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively”* with an overall mean of 3.35. The majority of the age groups responded similarly, except the 41 – 50 year olds ($n = 54$) who disagreed that there is inadequate technical infrastructure. This is supported by the statement *“The E-HRM implementation process is not adequately funded”* with a mean of 3.32. The 21 – 30 ($n = 160$) year olds returned the highest mean of 4.16, whilst the 41 – 50 year olds ($n = 54$) disagreed (2.77). Therefore, this

suggest that the participants understand what the key issues are in order to implement the e-HRM system.

5.3 Quantitative summary

This chapter has presented the analysis from the questionnaire data. Data obtained concerned the importance and impact in respect of the implementation and transition from HRM to e-HRM within the organisation of the Abu Dhabi , Department and was subsequently divided into six key themes. In addition, SPSS tests were conducted to evaluate the research objectives, which comprised of Independent *t* - tests, Pearson correlations and One - Way Anova, along with Duncan's Post Hoc Test. The findings are consistent with the broad literature which clearly acknowledges that the advent of information and communication technology (ICT) has been a driving force for the reconfiguration of services provided by HR, not only in terms of scope, but also in enhancing access and delivery to services by organisation stakeholders. Like most of dynamic organisations, ADPD HR possess different types of tools which facilitate in delivery of HR services. Findings reveal that at ADPD the key stakeholders are aware of the importance and benefits of implementing e-HRM and that it is time for HR services to move away from face-to-face and paperwork mode which is often time-consuming and slow and non-strategic, transaction-oriented services. The respondents generally showed mixed views towards e-HRM by highlighting the challenges and barriers of implementing e-HRM, citing mainly unclear strategy and conflicting priorities, resistance to change and inadequate coordination across departments. The findings show that

the level of readiness in terms of training and availability of resources explains partly why the implementation and usage of e-HRM is experiencing teething problems. Accordingly, ADPD needs to improve e-HRM capabilities and engage everyone concerned to play a positive role towards supporting the use of the eHRM system in order to achieve their organisational goals.

5.4 Qualitative Data analysis

5.4.1 Introduction

To support the findings from the questionnaires, a series of 8 interviews were conducted, selecting managers from different positions within the ADPD departments to find out the value added and constraints of implementing e-HRM in ADPD human resource functions. The interviews focused on the four themes of the study that emerged and were informed by the literature review and the questionnaire. The main objective of conducting qualitative interviews is to gain better understanding and provide fresh insights into the challenges of implementing e-HRM, in other words determining the enablers and barriers and the overall readiness for adopting e-HRM. The purpose in this section is to find out about and probe in more depth, the issues raised by the results of the questionnaire.

The rationale for conducting semi-structured interviews is based on their suitability and effectiveness. Semi-structured interviews provide a different perspective in

gauging the views and perceptions of interviewees on the subject of e-HRM in order to elicit detailed responses which would otherwise not have been captured through questionnaires. They are also deemed convenient for respondents who, due to their busy schedules, may be reluctant to fill in questionnaire. To ensure that the respondents understood the questions being asked and made aware of the aims of the research, a discussion was prompted between the researcher and the respondents on the importance of the study and its potential benefits for the management and decision-makers. The following areas were the focus of the interview discussions:

Table 5.26 Themes debated during interview

	Themes
1	e-HRM implementation drivers
2	e-HRM barriers and challenges
3	e-HRM strategic impact on performance and productivity
4	e-HRM implementation outcomes

5.5 Interview procedures

Semi-structured interviews are used in this study to obtain information which aims to challenge or to support the findings from the quantitative data obtained through surveys about the importance and benefits of implementing e-HRM. The decision

to use interviews places extra emphasis on personal language as data in addition to quantitative numerical data. Face-to-face interviewing is deemed appropriate in order to obtain in-depth meaning and gain insights about the level of understanding, awareness and readiness to implement e-HRM at ADPD

5.6 Participants' profiles and selection criteria

A variety of participants were selected to ensure as much representativeness as possible. The number of participants selected is immaterial as this research is predominantly quantitative backed by qualitative. Thus the emphasis is on gaining knowledge based on both qualitative and quantitative data, combining words and meanings and facts and figures to strengthen the generalisability of the findings.

The participants were selected based on:

1. First-hand experience in dealing with day-to-day ADPD HR activities and operations.
2. Experience and awareness of e-HRM challenges or benefits at ADPD.
3. Participants who hold vital information and experience in dealing with HRM and have a major interest and knowledge about e-HRM implementation and barriers affecting them in different ways.

The following table shows the profiles of the eight participants:

Table 5.27 Participants' profiles

	Gender	Age	Dept	Position	Level of Education	No of years at ADPD
1	Male	53	HR	General Manager	Bachelor	36
2	Male	48	HR	Deputy General Manager	Bachelor	29
3	Male	45	HR	Recruitment and Selection Department. Manager	Masters	26
4	Male	46	HR	Training Department. Manager	Masters	24
5	Male	45	HR	Planning Department. Manager	Masters	25
6	Male	44	HR	Education Department. Manager	Masters	24
7	Male	45	HR	Manager at School Department.	Bachelor	22
8	Male	41	HR	Personal Affairs Department Manager	PhD	24

5.7 Ethical considerations

The interview questions are informed from the literature and in line with the research questions and objectives of this study. Before the interview the researcher started by introducing himself and by informing the participants that the interview is for academic purposes and forms part of a PhD thesis. The researcher complied with the University's Ethics guidelines by ensuring that all interview participants were fully aware of the purpose of the research. The researcher also stressed that participation in this study was totally on a voluntary basis and the participants were free to decide whether to take part in it. The participants were

informed that they were still free to withdraw from participating in the interview at any time and without giving a reason.

5.8 Analysis of interviews

The researcher has several methods for interview analysis at his disposal, such as: thematic analysis, comparative analysis, content analysis, and discourse (Dawson, 2009). For the purpose of this study and in order to analyse the interviews, a research content analysis has been selected. Content analysis is a *“method where the researcher systematically works through each transcript assigning codes, which may be numbers or words, to specific characteristics within the text”* (Dawson, 2009:122). In this case the first step in content analysis is to conceptualise the data, then group them into meaningful categories, and then identify them into themes to explain the data.

5.9 Discussion of interview findings

The researcher started the interview by using ‘*Introducing Questions*,’ clear, short, and straightforward questions as a warm up, for instance ‘*How long have you been working at ADPD? Can you tell me what your job involves?*’ Next, there were ‘*Follow-Up Questions*’ such as ‘*Can you elaborate on what the phrase or term means to you?*’, ‘*Can you tell me more?*’, and finally ‘*Probing Questions*’ were used to get in-depth information about the extent to which e-HRM is understood and what the challenges facing ADPD are in integrating e-HRM strategy.

5.9.1 Theme one - 'e-HRM implementation drivers'

In response to the first question '*Who do you think is the prime responsible party in the implementation of e-HRM in Abu Dhabi ,?*', most of the interviewees showed a clear awareness of who they considered should be responsible for e-HRM implementation and the key drivers that should be made available for successful transition from traditional HR to e-HRM. Interviewees appeared to approve of the idea of moving away from HR manual applications to unified systems – in other words more functionality and more practicality. For example, interviewee A suggested that: "*Implementing e-HR is the responsibility of all HR workers from identifying the need for it while the support should be from top management and IT experts. It is mainly focused on HR but the whole organisation will benefit from having such an e-service for all of them.*"

It is worth noting that some interviewees were less forthcoming and did not elaborate on their answers despite encouragement from the researcher. Participants were asked about the level of readiness and infrastructure before implementing e-HRM: '*What do you think of the pre-arrangements that should be undertaken before the implementation of e-HRM in Abu Dhabi ,?*' The respondents produced straightforward answers and were all in agreement that in order to meet the Abu Dhabi government Vision 2030, e-HRM is one of the key drivers for the

development of human capital in the UAE. Participants argued that the organisation's overall culture and HRM strategy are key enablers which allow organisations to implement e-HRM successfully. Participants also stated that ADPD needs to make a significant investment of time and resources in implementing e-HRM. Another interviewee stated that employees' understanding of the importance and benefits of implementing e-HRM is vital for administrative efficiency and HR operational cost reduction. As manager B pointed out: *First of all the definition of e-HR should be clear to all people in the organisation, we do not want to end up having no use for it. Having a session of awareness before establishing the project is very important plus having the support from the leaders in the organisation and having the involvement of all parties that will be using the application'.*

The adoption of technology in HR is likely to become more widespread and organisations will continue to upgrade their systems to enhance delivery of HR services. This suggests that ADPD must keep pace with the technological developments, as one interviewee put it: *'it is an important aspect – we can't do without it'.* It can be argued also that e-HRM system is pertinent because it provides leaders with flexible working practices and huge reliable data for prompt decision making. In other words e-HRM supports leaders in their strategic role and decision making.

The broad picture that emerged from the responses clearly indicates that there are mixed reactions about the role of e-HRM with its multidimensional activities and

complexity requiring more than just a human resource strategy. Many participants implicitly stated that there is lack of awareness and a lack of initiatives, planning, or strategy in place at ADPD to implement e-HRM. Although some interviewees tried to avoid sounding negative, they felt optimistic that things will get better. There is a continuous improvement process within ADPD HR.

In response to the questions *“If e-HRM is successfully implemented, do you think there will be any changes in the role of personnel?”*, participants were unanimous that the level of application and enhancement of IT infrastructure and software used by the HR departments will lead to a shift in administrative and operational activities. Previously, HR role was overwhelmed by administrative burdens with the responsibility of running the day-to-day operational aspects of HR, but today HR has started to shift towards a more strategic role whereby it plays a key role in devising strategies for the organisation with accuracy of data. As one manager stated: *‘Yeah of course, the personal will be more focused on the strategic role rather than the transaction work. Nowadays it takes them ages to finish and look at every single employee with their allowances, promotion, etc.’* In addition, several participants agreed that the adoption of e-HRM will reduce costs. This is in line with the literature as Foster, (2009) argues, one of the biggest advantages of e-HRM is said to be cost reduction.

5.9.2 Theme two - ‘e-HRM barriers and challenges’

Overall, participants were swift in acknowledging that everything within HR is running smoothly and everyone is working in line with the leadership directions. Participants generally showed supportive views towards the efforts made by management in introducing e-HRM. When participants were asked '*From your point of view what are the barriers and challenges that might face and affect the implementation of e-HR?*', some interviewees were not overtly critical but referred to a lack of awareness regarding e-HRM in terms of lack of familiarity and expertise. Others mentioned the need for greater efficiency and competency of HR employees and the lack of clarity in strategy and procedures which are contributing factors, making the e-HRM integration process slow. This gives the impression that the e-HRM implementation process is struggling to take off. Another participant suggested that the problem resides is '*IT related and data collection is not sufficiently developed*'. Moreover, several participants stressed that management needs to understand that the successful implementation of any strategy or concept within an organisation depends to a large extent on the employees' commitment within the organisation. Initiating any form of strategy or policy without briefing or engaging employees or understanding how individuals react and experience these policies often leads to resistance. As one manager clearly stated, '*Commitment of the team who will handle the project and involvement of the executives, senior managers and employees are key to successful implementation.*' Other interviewees said that there is a shortage of a skilled work force and some spoke of encountering difficulties include training programmes and motivation. The conflicting views reflect the diversity of employees within ADPD in terms of age and number of years of work which might influence the adoption of e-HRM. Gauging

and understanding the complex mind-sets, reactions and interpretation of how implementing e-HRM at ADPD can be achieved. The views are polarised and this consistent with the literature which the satisfaction rate regarding the implementation of e-HRM is fragmented and there is lack of consensus about whether e-HRM is likely to transform and enhance all of the HR activities.

5.9.3 Theme three – ‘e-HRM strategic impact on performance and productivity’

The broad literature suggests that in principle the application of e-HRM drives an organisation’s performance; Beer et al. (1984) divide these into four possibilities:

- high commitment, related to motivation and understanding of the workforce;
- high competence, that describes the abilities of employees to learn new tasks if required;
- cost effectiveness, related to employee turnover rates and pay competitiveness
- higher congruence, which is concerned with the internal organisation

On this basis the interviewees were asked ‘*Do you think e-HR can play the role in improving the productivity of the employee and the organisation?*’ The great majority pointed out that employees and the organisation will definitely benefit from the implementation of e-HRM providing everyone is well informed and an effective training programmes is put in place. As one manager suggested ‘*Yes of course, it will help them in improving the way of delivering the work in better ways and*

condition with high quality'. Other participants argued that ADPD should use workshops as a way of increasing employee awareness about the importance of e-HRM. Others suggested participation and involvement in policy-making, putting in place a clear career path, an internal communication campaign, training, and team building as the way forward. Some participants, albeit not explicitly, hinted at the present challenges and constraints in successfully adopting e-HRM. These include shortage of sufficient skills in setting up and maintaining the system, not enough top management support and commitment, inadequate human resource knowledge by system designers and lack of applications for human resource users.

5.9.4 Theme four – 'e-HRM implementation outcomes'

Responses to the question, '*What do you think of the change that might happen when implementing e-HR? (employee and organisation)*' produced a consensus of opinions emphasising the possible outcomes that use of electronic HRM systems will bring to the organisation and employees. Firstly, implementing e-HRM, requires an efficient communication system. The message needs to be transmitted clearly, as it can easily be misinterpreted, creating confusion for employees which can affect the efficiency of the organisation. Secondly, although technological advances have significant advantages, the literature highlights that electronic media is highly impersonal and lacks the positive impact of face-to-face communication. Moreover, some participants suggested that increasing both recognition, and participating in decision making within the organisation may also enhance the chances of

successful implementation of e-HRM. As expressed by one manager 'Yes, Go ahead and implement it (e-HRM) but as I said, get all employees involved'. Another participant stated that through implementing e-HRM 'a better self-service portal can be provided to each employee which in a way can reduce the headcount of employees in each department and help saving costs for the company'. Overall, the participants were in favour of e-HRM implementation despite some elements of resistance to change from senior employees who find another a cycle of training a challenging task.

The substance of the above debate on the implementation of e-HRM at ADPD resides in the fact that it has not had the desired impact. The e-HRM system has not lived up to the users' expectations. The slow implementation process of e-HRM is due to a combination of factors, including inflexible organisational culture, inadequate planning and lack of readiness since users are unsure of the benefits that e-HRM offers.

5.10 Reliability and validity in Qualitative research

Whilst in quantitative research, the terms reliability and validity are important to demonstrate the credibility of the research, however, in qualitative studies they are less relevant. Stenbacka (2001) claims that the concept of reliability is not relevant in qualitative research, or might even be misleading. Additionally, as stated by Seale (1999), reliability and validity are not adequate for qualitative researchers; instead quality should be of biggest importance.

5.11 Summary of qualitative data

Interviews were conducted with a small number of personnel representing eight different general directorates (departments) at the ADPD, based on their expertise and experience and their ability to provide useful information with breadth and depth relating to the themes of e-HRM throughout the entire organisation. The opportunity for personnel to discuss issues relating to e-HRM in a private one-to-one encounter with the researcher was thought to be conducive to the objective of obtaining honest responses and to highlight aspects of e-HRM that might not otherwise surface through the questionnaire.

This study aimed at examining the importance and challenges of adopting e-HRM at ADPD. In order to get a full picture and obtain comprehensive rich data to allow the researcher to make critical judgements and interpretations, and in turn to suggest changes and improvements in the way e-HRM has been managed so far by ADPD, both quantitative and qualitative methods were used. To grasp how relational e-HRM processes affect ADPD HR, employees' perceptions and attitudes towards e-HRM were sought. It was not deemed possible to analyse and examine e-HRM from all angles with just numerical data. For this reason, qualitative and quantitative methods were the most suited to help retrieve information to achieve the aim of this study.

What transpired from the interviews is that through using e-HRM systems, communication between the HR department and the key stakeholders within the

organisation has seen continuous improvement. If e-HRM systems are said to bring standardisation in HR activities in different areas, this was slow, indicating work in progress within ADPD. The adoption of e-HRM as a decision-making tool at ADPD has not been fully exploited and is not working to its full potential, as e-HRM can make fast and accurate data available about the organisation's human resources.

5.12 Concluding remarks

This chapter presented the analysis of quantitative and qualitative data. It discussed and analysed the extent to which the two sets of data are consistent. The findings relate to the research questions set by this study. Data were analysed to explore and analyse the benefits and challenges of implementing e-HRM within the ADPD setting. Findings from this study have been found to be consistent with the findings of several related studies on e-HRM. There is a synergy between qualitative and quantitative findings indicating that e-HRM plays an important part in enhancing the e-HR function. e-HRM has a pivotal role in providing better quality employer to-employee services. The findings revealed that there is a general agreement, in theory, that e-HRM is a means of reducing the costs of operation and speeding up processes of delivering services. It also enables managers to deliver better HR information and communication. In practice, the understanding and use the e-HRM system may take a long time to master. The issue of IT resources and lack of staff trained how to use it is deemed as a major challenge. Participants suggested that ADPD readiness to adopt e-HRM is vital for successful

implementation. The qualitative results showed consistency about e-HRM as an effective human resource instrument. However, there is important inconsistency of views on a range of issues and challenges regarding the integration of e-HRM, including a lack of shared understanding about how e-HRM will bring about a strategic transformation and whether managers have the knowhow to deliver a strategically focused e-HRM toolset (Foster 2009). Most of the qualitative findings are complementary; they validate and supplement the results of the quantitative findings.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This study examined the benefits and challenges of implementing e-HRM as a means of driving HRM strategies, policies and practices, using IT within ADPD. It assessed the challenges and barriers that impede the implementation of e-HRM and identifies the enablers and success factors for its effective implementation. In spite of the fact that, as a research area, e-HRM has generated extensive coverage, it is still difficult to draw clear cut conclusions and make a final judgement about its strategic claims. This chapter aims to interpret and explain the key findings obtained using quantitative and qualitative data collection and link such findings to the literature and the research objectives and questions, highlighting the key strands and themes of relevant e-HRM literature and demonstrating how these are consistent or contradictory with this study's findings. It will also draw conclusions and underline any trends or unexpected e-HRM patterns that have emerged from the results.

This chapter also provides the contribution to knowledge, highlights the limitations of this study and suggests areas for future research. It makes recommendations regarding the implementation of an e-HRM strategy that can be used to enhance HR activities and service delivery.

Technological innovation and development is growing faster than anyone ever imagined and organisations are learning to embrace change in a dynamic way using web-technology to boost their activities, which is transforming the way organisations and companies run their businesses and manage their employees. In addition, thanks to the use of e-HRM, HR professionals are improving the way they perform their tasks, handle a variety of responsibilities, and interact with key stakeholders. Thus modern technology has provided HR with the tools necessary to disseminate information and quality service that employees need promptly and efficiently, motivating them to enhance performance and productivity.

6.2 Positioning this study within e-HRM key literature findings

Literature on e-HRM continues to expand and the relevance of e-HRM is evidenced in special journal issues, conferences, and academic publications. The purpose of this overview of the key literature is to demonstrate whether the findings of the present study are consistent and relate to those of similar studies. It seeks to show the extent to which the findings support or challenge the existing body of e-HRM literature. It elicits the main themes that emerged and positions this study within the broad e-HRM debate. It aims also to show how this literature enabled the research to formulate the quantitative survey and qualitative interview questions.

An overview of the literature reveals that e-HRM is a relatively new concept within HRM and it refers to the adoption of IT by organisations to support HRM processes. Most of the previous studies conducted on e-HRM claim that the *'gold*

rush’ for the use of IT by organisations is based on the perceived benefits such as competitive advantage, cost reductions, improved employee services, and increased productivity which in turn enable the organisation to achieve its mission objectives and vision. Thus, the literature argues that integrating and aligning IT with business is likely to add value to the organisation by boosting HR functions and capabilities. However, many researchers on e-HRM argue that integrating IT to support HR activities, can only create value if it is well planned and properly implemented. e-HRM is as good as its end users. e-HRM implementation is closely linked to the level of employee engagement and preparedness. Employee attitude and mind-set are key determinant factors in the success or failure of e-HRM adoption.

Diverse and conflicting views and suggestions emerged from the e-HRM literature. Some authors confined their research, focusing on the role of e-HRM as wide ranging on-line support, including all processes, activities, data and information required to manage the human capital of an organisation. These authors regard e-HRM as a resourceful tool, accessible to a broad group of different stakeholders, addressing a broad range of HR activities such as, e-learning, e-training, e-recruitment, e-performance, e-compensation etc. For others, e-HRM is an ‘umbrella term’, implying a range of meanings often overlapping, depending on who you ask to define it. Much of the literature on e-HRM tends to focus on e-HRM definitions, types and activities of e-HRM, and the benefits and outcomes of e-HRM.

The proliferation of studies on e-HRM over the last three decades may suggest that this research area is booming with theoretical and innovative insights, whereas in fact e-HRM still lacks a solid theoretical base in terms of depth and breadth. e-HRM research is dominated by a handful of regular researchers who are actively engaged with the aim of taking e-HRM research to a higher level. So far e-HRM is still work in progress. It is in its developmental phase and it is difficult to formulate any clear theoretical framework to optimise and make use of the current fragmented perspectives.

Although e-HRM has been described as a 'way of implementing HR strategies, policies, and practices in organisations through a conscious and directed support with the full use of web-technology-based channels', the e-HRM debate has evolved to challenge whether e-HRM is actually fit for driving HR strategies. Some contend that e-HRM makes a small strategic contribution in the sense that the use of IT releases HR employees from administrative chores, which enables them to focus more on value-adding strategic activities. Other authors are sceptical as to whether e-HRM has the potential to create strategic value and to drive the HRM transformation from a generic administrative burden to a more strategic function. The jury is still out on this issue. Many studies have investigated the success factors and challenges for implementing e-HRM systems within organisations. Although these studies provide some interesting insights and have contributed to enriching the eHRM debate, the results are inconclusive and empirical evidence is in short supply.

Different authors have suggested and developed e-HRM models based on previous models which they have adapted to suit their agenda and HR management context. Others have created their own models based on their own field data. It is evident that there will be no one solution or one size model that fits all regarding e-HRM adoption. Moreover, the models suggested in the literature are not necessarily compatible or exportable and must be designed by the organisation concerned and justified by its advantages, benefits and whether it fits the organisational mind-set and culture.

The literature on e-HRM adoption reveals that many organisations have experienced teething problems when implementing e-HRM. Some of these challenges include:

- Attempts are marred by a bureaucratic organisation of top down management.
- Lack of adequate planning and insufficient resources leading to a shaky and slow start to its implementation.
- Resistance to change driven by inflexible organisational culture and mind-set.
- Lack of real employee empowerment
- Inadequate training in IT skills for employees, including managers.

6.3 Linking findings to the study objectives

The contribution that e-HRM makes to the efficiency of HR seems to be accepted and acknowledged by academics as well as HR practitioners. There is thus a consensus regarding e-HRM fitness for purpose. e-HRM has cut down much of the administrative burden and enabled managers and employees to focus on more important responsibilities. This in turn has led to cost effectiveness but also led to raising employee motivation, satisfaction and performance.

Findings indicate that the implementation process of e-HRM at ADPD, based on the sample under consideration, is viewed by the majority of participants to be struggling to get going. e-HRM is said to be faltering at best. This is in line with the literature which suggests that, despite the excitement about the claim regarding the strategic benefits of the use of IT to support HR functions and improve overall performance, the evidence to back up this claim in terms of clear cut outcomes in many institutions that adopted e-HRM remains inconclusive.

Findings revealed that one of the main challenges during the transition from HRM to e-HRM is affected by the complex organisational and management culture of ADPD. ADPD is a pyramid of multiple levels of hierarchy, with a tradition of top-down chain of command. Participants were split in their views over whether ADPD HR is committed to a shift from HR to e-HRM, with more males than females believing that to be the case. The findings also showed that the mechanisms and plans for the transition to e-HRM were not well communicated. Participants implicitly suggested that, in order to implement successfully e-HRM systems, it is important to remove the challenges and barriers before the transition process. They suggested it is important to start by getting the fundamentals right, in

particular addressing areas such as clear communication and evaluation of the level of readiness for the implementation of e-HRM.

Regarding the extent to which ADPD management supports and is fully behind the e-HRM implementation process, the findings suggest that management has neither been reactive nor proactive. As a consequence, participants are unclear where they stand. Paradoxically, findings indicate that some female participants thought management fully supports e-HRM adoption. As stated by the literature, the characteristics and culture of an organisation are likely to affect e-HRM system implementation and use, and this seems to apply to ADPD as an entity with its own specificities and character. Evidence from the literature strongly suggests that there is a correlation between the adoption of e-HRM and the way an organisation is run.

It is clearly evident from the data that a large number of respondents stated that they had not been made aware of any e-HRM plan and vision, nor had they been informed of IT training opportunities to prepare for e-HRM adoption. Other respondents clearly indicated that they did not have confidence that HR management will implement e-HRM. A minority of respondents were totally positive in their responses giving the overall impression that everything is working and in place according to the ADPD plan and vision. While several respondents agreed that there is room for improvement, they too felt that management seems to be doing its best and there was nothing negative to report.

Findings regarding '*Challenges of technology resources/facilities*' produced inconsistent and diverse responses. Some believe that the IT resources and infrastructure at ADPD are adequate. Others feel that the current equipment is not as good as should be expected and often not fitting with the prestigious image of ADPD. Older participants claimed that the IT equipment and resources are in place and ready to support e-HRM implementation. In contrast, younger participants were concerned about IT challenges.

The essence of the debate is that there is evidence which suggests that the ADPD HR management is trying hard to keep pace with technology innovations but seems to be falling short of achieving its target. The general impression conveyed through the participants' responses is that the ADPD is adopting a mitigated approach to implementing e-HRM. It needs in future to be more proactive and enhance the employees' engagement with the e-HRM implementation process.

Regarding the question about the current barriers and challenges to implementing e-HRM within ADPD, it was found that most respondents were straightforward in expressing real concern regarding its implementation, highlighting firstly, that the e-HRM adoption plan is not well explained. Secondly, not enough time has been allocated to undertake the necessary diagnosis to define the transition process from conventional HR functions to e-HRM. Thirdly, staff and employees have not been trained and do not have the required capabilities and skills to implement the e-HRM system. These findings are consistent with previous studies which identified a series of constraints facing e-HRM adoption within organisations.

The main channel of thought that emerges from the above discussion is that there is a gap between the perceived urgency and advantages of implementing e-HRM at the ADPD to sustain its competitive edge and preserve the image of the organisation and its level of readiness and management support to set and implement a realistic e-HRM strategy. This highlights the pressing need to put in place an e-HRM policy that takes the ADPD into the 21st century.

6.4 Linking Qualitative and Quantitative findings

The use of a single data collection method is susceptible to error; therefore, the use of both methods – quantitative using questionnaires and qualitative using semi-structured interviews is warranted in this study. Findings showed that respondents from the two sets of data collection methods appear to agree that the advantages of implementing e-HRM which aim at improving HR administrative efficiency, reducing costs, standardising procedures and processes and enhancing recruitment, selection and performance appraisals, are too good to be disregarded. Similarly, the results of the interviews can be said to be similar to the results from the surveys and there is no real clash between the interviews and the survey findings. It was found that the majority of employees have shown some level of understanding about the importance of adopting e-HRM.

Findings from the quantitative and qualitative methods are consistent and support each other, albeit in contradictory ways at times. Both sets of findings are lenses that seem to capture different perspectives of the current HR practices within the

ADPD and the efforts initiated so far to implement e-HRM. It can be argued that both these conflicting and complementary findings were needed to convey viewpoints and to inform decision-makers and raise their awareness. These findings are interesting and constructive because they clearly reveal that ADPD employees and HR management perceive and experience e-HRM differently. Clearly, the research findings indicate that implementing e-HRM at ADPD is facing some challenges, and the existing HR practices and the mind-sets of employees and managers are not helping the adoption process. This provides supporting evidence that it is difficult to assess the existing challenges and HR practices against the reliability of the employees' responses. The reality is that employee participation and consultation in the decision making process or in generating innovative ideas for driving e-HRM implementation is rarely taken into account by the management.

To conclude, the main findings can be broadly summed up as follows:

- e-HRM lacks a solid theoretical background. HR departments at the ADPD still run and operate some of their activities and functions in a traditional way.
- e-HRM is still not a fully-fledged research area

The study findings contribute to the current debate on e-HRM by contextualising the challenges and enablers of e-HRM adoption within a , organisational setting and by broadening the understanding of the factors that influence the

implementation process. The findings suggest that the ADPD management has been reticent to fully support e-HRM. The findings suggest that, although participants have some knowledge of the of the challenges regarding the implementation of e-HRM within the AD , department, the views of the participants suggest that they disagree that ADPD has the necessary IT infrastructure in place in order to make e-HRM operational. The findings show that the level of readiness in terms of training and availability of resources is below expectations. This explains partly why the implementation and usage of e-HRM is experiencing teething problems. Accordingly, ADPD needs to improve e-HRM capabilities in order to achieve their organisational goals.

6.5 Recommendations

The benefits of adopting e-HRM within organisations are well-documented in the literature: to support HR activities and function; enhance efficiency and effectiveness of HR service delivery; boost strategic orientation of the role of HR in order to gain competitive edge. Findings suggest in parts that leadership and management at ADPD are aware that to achieve the government Vision 2021, they need to adopt the principle of continuous improvement in order to keep pace with technological innovation and advancement to make ADPD HR a dynamic and fully prepared and engaged place to work. e-HRM must be adopted and implemented smartly to perform to its potential. At the moment e-HRM strategy is vague or absent as testified by the respondents who said they have any knowledge of e-HRM vision. Moreover, several gaps and shortcomings exist in the HR IT training programmes. One of the key challenges in trying to implement e-HRM at the ADPD

is translating complex and vague unproven e-HRM theories and approaches from the literature into a strategy which has practical implications and fits within the ADPD organisational culture. Implementing e-HRM requires the creation of the right conditions with the leadership support and commitment and an engaged workforce who must work as a team. The following are practical recommendations for the ADPD, based on the findings from the literature and this study findings:

- Evaluate the current ADPD HR infrastructure and IT equipment and assess the HR employees' capabilities in order to identify the gaps and determine the future needs of the organisation.
- Involve senior management and engage them and the employees in the implementation of e-HRM.
- Create an organisational culture that promotes the adoption of eHRM.
- Improve communication channels between the different departments and with the employees.
- Learn about employees' mind-sets and HR managers' preferences regarding how e-HRM can be successfully implemented.
- Provide regular training for HR staff and managers on e-HRM.
- Develop a plan that continuously monitors e-HRM activities through employee participation and allows for sharing knowledge and information.
- Maximise the use of e-HRM to empower employees and different levels of management, to participate in making decisions that have a direct bearing on their motivation and performance.

6.6 Contribution to knowledge

This thesis has built on rigorous and extensive previous research on e-HRM. The original contribution emerges from the gaps highlighted in the literature. The findings of this study add new perspectives by positioning it within a complex organisational Middle Eastern setting and by expanding the e-HRM literature which will benefit future research. Much of the literature on e-HRM has been conducted within a well-established organisational business context in western developed countries. There is hardly any research on e-HRM involving the ,.

- a) Although e-HRM as a research topic has been widely researched in a variety of contexts, however, in developing countries it remains an area with large scope still to be explored.
- b) Research findings of studies conducted in developed countries are difficult to replicate in developing countries due to differences in organisational culture, level of IT infrastructure and employee mind set.
- c) There is a knowledge gap in terms of the applicability of the existing e-HRM theoretical base in non-Western countries and in particular in the Middle East.

6.6.1 Implications of the findings of the study

This study has several practical implications:

a) Contribution to policy

The findings of the study aimed at empirically supporting the decision-makers at ADPD to review their e-HRM plans. This research investigated the challenges and drivers of implementing e-HRM at ADPD. The results of the study will contribute to identifying the shortcomings of e-HRM current practices and raising awareness about the root causes why e-HRM implementation has faltered and put forward measures on how they can be addressed. The research findings will benefit decision makers, and are likely to influence policy as they have highlighted the flaws and the constraints related to the adoption of e-HRM by providing fresh insights and additional fact-finding analysis of the issue of implementing e-HRM.

The study findings lead to fresh information on e-HRM implementation enablers that can assist in the formulation of a better policy/strategy to efficiently adopt e-HRM. The extensive literature review has provided a pool of information of current thinking about the theoretical e-HRM models, approaches, drivers and key determinants which can benefit the Abu Dhabi , Department (ADPD). Therefore the literature and the findings of this study combine to provide insights for management and leadership at ADPD regarding the effective application and management of e-HRM.

b) Improving practice

The study findings can lead to improved e-HRM practice. This means that recommendations will be made available to ADPD based on the findings of the study. Findings from quantitative and qualitative data highlighted various issues, and that management appear to have underestimated the importance of staff

preparedness and IT training in managing e-HRM effectively. These issues include:

- No clear cut e-HRM strategy
- Inadequate IT HR staff training
- Insufficient management support to implement e-HRM
- Top down communication and no employee engagement or participation in decision making

Based on the above evidence this study contributes to policy by recommending an action plan for ADPD to address the slow and unsatisfactory progress regarding e-HRM implementation.

- The ADPD leadership needs to draw up an action plan to stimulate and motivate e-HRM implementation.
- They should provide HR employees with adequate IT training, coaching, and the support they need to be successful.
- A follow-up HR employee survey should be undertaken to measure the success rate and progress made in relation to e-HRM since last year.

6.7 Limitations of this study

Although, this research has achieved its aim and objectives set out in Chapter One, which mainly focused on investigating the challenges and drivers of implementing e-HRM at ADPD, however, no research is perfect as all studies must

contend with some limitations and this study is no exception. Firstly, the data have been collected from a single entity Abu Dhabi , Department (ADPD). Although this allowed easy access to data collection, it may have also limited the generalisability of the findings or make the findings of the present study confined to similar , organisations operating in the United Arab Emirates (UAE). The findings, although very useful, may not be generalisable to other business sectors in the United Arab Emirates (UAE) due to the different organisational culture and type of activity.

Moreover, the population of the questionnaire sample could have been greater, and the sample size of the semi-structured interviews was relatively small. Although the response rate from the questionnaire was good, the research would have benefitted and data would have been more meaningful had a larger number of ADPD employees participated. The data collated may therefore only provide a limited insight into e-HRM challenges and drivers.

Secondly, the quality of the data obtained might be open to bias as the researcher is an insider researcher and a senior member of the HR management team and therefore not entirely independent of the study, although all necessary safeguards were taken to enhance reliability and accuracy of the data. Potential bias is often inevitable in research. The data reported in this study may thus be subjective in parts. The study findings may have been different if employees had potentially felt more at ease to express their views openly. The researcher cannot corroborate that the answers provided by participants are always genuine. This may be due to the participants' efforts to please the researcher

who is a member of the senior management team within the ADPD, and therefore some might have provided what they believe to be the desired feedback, or not being critical of their e-HRM experience within the organisation through fear of retribution, despite assurances of anonymity and confidentiality concerning the information gathered for this research.

Thirdly, another potential limitation of this study stems from the fact that the data collection instruments used for this study (quantitative survey and qualitative semi- structured interviews) were translated from English into Arabic. The translating process inevitably leads to some loss of meaning due to the linguistic and cultural differences between Arabic and English. Although the loss of meaning was minimised by checking its accuracy with translation experts, something is always lost in translation, especially between Arabic and English as these two languages operate on different thought processes and a different mind-set.

Fourthly, other factors have had some impact on the progress of this study, such as time constraints. The timeframe was a limiting factor as the researcher had to balance the time between additional personal and professional responsibilities, family and research commitments which led to further pressure and impacted on the quality of research. In many cases this is a common limitation for PhD research students. With greater time available it would have been possible to collect and analyse larger sets of data. A greater scope of data would potentially provide deeper and broader insights into the issue of e-HRM. In addition, the

change of my main supervisor, the Director of Study, during my writing stage, through retirement, also had a disrupting and unsettling impact.

6.8 Areas for future research

The present study findings provided interesting and fresh insights into the challenges of implementing e-HRM within the public sector setting. Although, e-HRM has attracted plenty of attention and generated extensive interest from both practitioners and academics, there is still scope for further research in this area in the Middle East. e-HRM is pertinent in all sectors and it remains under-researched in the United Arab Emirates (UAE). This study acknowledges that further in-depth research around the topic, particularly in the United Arab Emirates (UAE), is important to investigate the key successful factors for implementing e-HRM.

There are several e-HRM perspectives, therefore that deserve further investigation, particularly on the strategic contribution of e-HRM and how e-HRM can be implemented within challenging cultural and organisational settings. There is also a lack of studies on the impact of e-HRM on employees, particularly those in the Middle East.

The following are a number of thought-provoking research questions and areas that can be suggested for future research:

- The study could be replicated by other researchers in Dubai , Department (DPD). It should find answers to questions such as: what worked well and what did not? Are they experiencing the same constraints as ADPD?.
- Similarly a comparative study could be conducted with other United Arab Emirates (UAE) sectors to examine e-HRM best practice involving a large quantity of qualitative and quantitative data being collected. Such extensive research is likely to reveal interesting insights.
- Research should be undertaken to investigate the rate of success of e-HRM strategies.

REFERENCES

Ababneh, K. and Chhinzer, N. (2014). Job Applicant reactions to selection methods in the UAE. *Journal of International Management Review*. Vol 10. No 2

Abdorasoul, Hosseini, S. and Nematollah, K. (2013) Electronic Human Resources Management and the Effectiveness of Human Resources Management. *European Online Journal of Natural and Social Sciences*; vol.2, No. 3(s), pp. 1812-1819 ISSN 1805-3602 www.european-science.com

Abdulla, J.M. (2009) Determinants of job satisfaction among Dubai , employees. Unpublished thesis submitted for PhD at University of Glamorgan

Absal, R. (2008). Staff Reporter.www.pressreader.com/uae/gulf-news/20080105/281573761367385

Abu Dhabi , (2008) Abu Dhabi , Strategic Development Plan, 2008 - 2012: Progressive , for a Modern City, Abu Dhabi: Abu Dhabi , <https://www.ad.gov.ae/en/Pages/home.aspx>

ADPD n.d. (2013, 2014) Organizational Structure of Human Resource Management. Accessed 25th May 2014, from <http://www.hr.ad.gov.ae/>

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.

Al-Ali, J. (2008). Emiratisation: drawing UAE nationals into their surging economy. *International Journal of Sociology and Social Policy*, 28(9-10), 365-379.

Al-Dmour, R.H and Shannak, R.O (2012) Determinants of the Implementation Level of Electronic Human Resources Management (E-HRM) in Jordanian Shareholding Companies. *European Scientific Journal*. August edition vol. 8, No.17 ISSN: 1857 – 7881 (Print) e - ISSN 1857- 7431

Alghafri, A. (2015). Literature Review on: 'The Advantages and Disadvantages of Implementing E-HRM for an Organisation, E-Learning as an Example' *American Journal of Economics* 2015, 5(2): 51-55 DOI: 10.5923/c.economics.201501.02

Ali, G. and Magalhaes, R. (2008) Barriers to implementing e-learning: A Kuwaiti case study, 'International Journal of Training and Development,' 12 (1): p. 36–53

Al Ittihad Newspaper 2013 - <https://en.wikipedia.org/wiki/Al-Ittihad> . (Emirati newspaper)

AlKhouri A.M. (2012). eGovernment Strategies. The Case of the United Arab Emirates (UAE) *European Journal of ePractice*. www.epracticejournal.eu N° 17 . September 2012 · ISSN: 1988-625X <http://www.emiratesegov.ae>

Almanhali, M., Radaideh, M. and Shehabuddin, T. (2006). e-HR: A Custom Electronic Human Resources Management System. IDEA GROUP PUBLISHING 701 E. Chocolate Avenue, Suite 200, Hershey PA 17033-1240, USA; URL-<http://www.idea-group.com>

Almanhali, M., Radaideh, M. and Shehabuddin, T. (2013) *e-HR: A Custom Electronic Human Resources Management System*. *Emerging Trends and Challenges in Information Technology Management*, Vol 1 and 2

Al-Nuseirat, A. and Biygautane, M. (2014). The Impact of effective training on Organizational performance in Dubai's public sector, Mohammed Bin Rashid School of Government.

Al-Raisi, A.A.N. (2011) E-performance assessment system in governmental organizations in the United Arab Emirates. Unpublished Thesis. Coventry: Coventry University.

Alter, S. (1999). "A General, Yet Useful Theory of Information Systems". *Communications of the AIS*, 1(March), article 13.

Amaratunga, D., Baldry, D., Sarshar, M. and Newton, R. (2002) Quantitative and qualitative research in the built environment: application of "mixed" research approach, *Work Study*, 51(1), pp.17-31.

- Anohina, A. (2005). Analysis of the terminology used in the field of virtual learning. *Educational Technology & Society*, 8 (3), 91-102
- Anohina-Naumeca, A. (2015). Justifying the usage of concept mapping as a tool for the formative assessment of the structural knowledge of engineering students. *Knowledge Management & E-Learning*, 7(1), 56–72.
- Arjomandy, D. (2013). Chase the Pace of e-HRM Step-by-Step" <https://danialarj.wordpress.com/2013/07/> accessed April 2017
- Armstrong, M. (2006). *A Hand Book of Human Resources Management Practice*, London: Kogan Page.
- Ary, D., Jacobs, L.C, Razavieh, A. and Sorensen, C. (2009) *Introduction to research in education*, 7th Ed., Belmont, CA: Thomson and Wadsworth.
- Aswathappa. (2008) *Human Resource Management, Text and Cases*, 2008, p. 691
- Avison, D. and Elliot, S. (2006) *Information Systems: The State of the Field*. Publisher John Wiley & Sons, Chichester, England. 3-18
- Bagozzi, R.P. (2007). The Legacy of the Technology Acceptance Model and a Proposal for a Paradigm Shift. *Journal of the Association of Information Systems*. 8(4). p.pp. 244–254.
- Ball, K. S. (2001). The Use of Human Resource Information Systems: a Survey. *Personnel Review*. 30(6), 667-693.
- Banerji, S.C. (2013) A Study of Issues & Challenges of Implementation of Information Technology in HRM. *Global Journal of Management and Business Studies*. ISSN 2248-9878 Volume 3, Number 4 (2013), pp. 435-440
- Barrett, M. and Oborn, E. (2013) Envisioning E-HRM and strategic HR: taking seriously identity, innovative practice, and service. *The Journal of Strategic Information Systems*, 22 (3). pp. 252-256.
- Bartlett, J.E., Kotlik, J.W., and Higgins, C.C. (2001) Organisational Research: Determining Appropriate sample Size in Survey Research. *Information Technology, Learning, and Performance Journal*, 19(1), pp 43-50
- Bartram, D., (2000). Internet Recruitment and Selection: Kissing Frogs to Find Princes. *International Journal of Selection and Assessment*, Vol.8,no.4, pp.261
- Bates, A.W.T. (2004). *Technology, e-learning and distance education* (2nd edition). Routledge Falmer Studies in Distance Education Series. 246 pages London
- Beckers, A.M. & Bsai, M.Z. (2002). A decision support system classification model for research in human resource information systems. *Information Systems Management*, Vol.19, No. 3, pp. 41-50.

- Beer, M., Spector, B., Lawrence, P. R., Quinn-Mills, D., & Walton, R. E. (1984). In: Bernardin, H. J. (2007). *Human Resource Management: An Experiential Approach*. New York: McGraw-Hill.
- Bell, B. S., Lee, S. W., & Yeung, S. K. (2006). The impact of e-HR on professional competence in HRM: Implications for the development of HR professionals. *Human Resource Management*, 45(3), 295-308.
- Benassi, P. (1999). "TRUSTe: An Online Privacy Seal Program". *Communications of the ACM*, 42(2).
- Berglund, H. (2007) Researching entrepreneurship as lived experience, in N. Neergaard and J.P. Ulhøi (eds.), *Handbook of Qualitative Research Methods in Entrepreneurship*, Cheltenham, UK and Northampton, MA, USA: Edward Publishing
- Berners-Lee, T. (2000). *Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web*. New York: Harper-Collins
- Bertram, D. (2007). Likert Scales. Calgary, Alberta, Canada: Accessed on January 26th 2017, from the University of Calgary Department of Computer Science website: <http://poincare.matf.bg.ac.rs/~kristina//topic-dane-likert.pdf>.
- Bhatt R. (2015) E-HRM review and implications. *J. Advances Bus. Management* 1(4): 387-389,
- Blaikie, N. (1993) *Approaches to Social Enquiry*, 1st ed, Polity Press, Cambridge
- Bodea C., Bodea V., Zsolt M. (2003), "Human Resource Management in the Internet Age: e-Recruitment and e-Selection Methods", *Economy Informatics III*(3): 5-7.
- Bondarouk, T. (2016) Electronic HRM. In: Wilkinson. A and Johnstone, S. (Eds.), *Encyclopaedia of Human Resource Management*. Edward Elgar, Cheltenham, 106-107.
- Bondarouk, T. (2014) "Shared services as a new organizational form" Emerald Group Publishing
- Bondarouk, T., (2011) Theoretical Approaches to e-HRM Implementations. In Bondarouk, T., Ruël, H. Looise, J. (eds.) *Electronic HRM in Theory and Practice*. Advanced Series in Management. Volume 8. Emerald Group Publishing Limited, 1-20
- Bondarouk, T. and Brewster, C. (2016). Conceptualising the future of HRM and technology research. *The International Journal of Human Resource Management* Volume 27
- Bondarouk, T. Ruël, H., Parry, E. (2017) *Electronic HRM in the Smart Era*. Emerald Group Publishing

Bondarouk, T. & Furtmueller, E. (2012) "Electronic Human Resource Management: Four Decades of Empirical Evidence", Proceedings of the Academy of Management, Best Paper Proceedings in the Human Resource Management Division (pp 1-39). Boston, USA, Aug 3-7, 2012.

Bondarouk, T. and Ruel, H. (2009) Electronic Human Resource Management: challenges in the digital era. *The International Journal of Human Resource Management*, 20(3), pp.505-514

Bondarouk, T. and Ruël, H. (2013). The strategic value of e-HRM: results from an exploratory study in a governmental organization. *The International Journal of Human Resource Management* 24 (2), 391-414

Bondarouk, T. Harms, R. and Lepak, D. (2015) Does e-HRM lead to better HRM service? *The International Journal of Human Resource Management*, DOI: 10.1080/09585192.2015.1118139

Bondarouk, T., Harms, R., and Lepak, D. (2010). Doing e-HRM and doing it right: When does e-HRM utilization lead to improvements in HRM services? An analysis under low and high appropriation regimes. Paper presented at the Annual Meeting of the Academy of Management, August 6-10, 2010, Montréal, Canada.

Bondarouk, T., Parry, E, and Furtmueller, E. (2017). Electronic HRM: four decades of research on adoption and consequences, *The International Journal of Human Resource Management*, Pages 1-34 | Published online: 06 Nov 2016, <http://dx.doi.org/10.1080/09585192.2016.1245672>

Bondarouk, T., Ruel, H., & van der Heijden, B. (2009). E-HRM effectiveness in a public sector organization: a multi-stakeholder perspective. *The International Journal of Human Resource Management*, 20(3), 578-590.

Bondarouk, T., Schilling, D., and Ruël, H. (2016) eHRM adoption in emerging economies: The case of subsidiaries of multinational corporations in Indonesia. *Can J Adm Sci*, 33: 124–137. doi: 10.1002/cjas.1376.

Borck, J.R. (2000), Recruiting systems control resume chaos. *InfoWorld*, vol. 22, no.30, pp.47-48.

Boudreau, J. and Lawler, E. (2014). Stubborn traditionalism in HRM: Causes and consequences *Human Resource Management Review*. Volume 24, Issue 3, September 2014, Pages 232-244

Bowen, D. E., & Ostroff, C. (2004). Understanding HRM–Firm Performance Linkages: The Role of the "Strength" of the HRM System. *Academy of Management Review*, 29(2), 203-221.

Boxall, P., and Purcell, J., (2011). *Strategy and human resource management*. New York: Palgrave MacMillan

- Brace, N. Kemp, R. and Snelgar, R. (2012). SPSS for Psychologists. 5th Edition. Basingstoke. Palgrave Macmillan
- Broderick, R. & Boudreau, J. W. (1992) Human resource management, information technology and the competitive edge. *The Executive*, Spring, 6, 2, 7-17.
- Brown, D. (2002). E-HR victim of unrealistic expectations. *Canadian HR Reporter*, 15(5), 1.
- Brown, M. (2012). Towards a new government in British Columbia, [Online Kindle edition, Amazon Digital Services, Inc.]
- Brown, K. and Charlier, S. (2013). An integrative model of e-learning use: Leveraging theory to understand and increase usage."
- Brown, S., Massey, A., Montoya-Weiss, M. & Burkman, J. (2002). Do I really have to? User acceptance of mandated technology. *European Journal of Information Systems*, 11(4), 283-295. *Management Review*, 23: 37-49.
- Bryman, A. (2001) *Social Research Methods*. Oxford, Oxford University Press
- Bryman, A. (2004) *Social Research Methods*, 2nd edition, Oxford, Oxford University Press
- Bryman, A. (2008) Why do researchers integrate/combine/mesh/blend/mix/merge/fuse quantitative and qualitative research?, in Bergman, M.M. (Ed.), *Advances in Mixed Methods Research*, Sage, London, pp. 87-100
- Bryman, A. (2012) *Social Research Methods*, 4th Edition, Oxford, Oxford University Press
- Bryman, A. and Bell, E. (2007) Planning a research project and formulating research questions. In: *Business Research Methods*. New York. Oxford University Press. P. 75-92
- Bryman, A. and Bell, E. (2011) *Business Research Methods*, 3rd edition, Oxford, Oxford University Press
- Buckley, P., Minette, K., Joy, D., & Michaels, J. (2004). The use of an automated employment recruiting and screening system for temporary professional employees: A case study. *Human Resource Management*, 43(2-3), 233-241.
- Budhwar, P. and Mellahi, K. (2007) *Managing HRs in the Middle-East*, Routledge Taylor and Francis Group, London and New York.
- Burbach, R., & Royle, T. (2013). Levels of e-HRM adoption in subsidiaries of a US multinational corporation: the mediating role of power, politics and institutions. *European Journal of International Management*, 7(4), 432-449.
- Burns, N. and Grove, SK. (2001) *The Practice of nursing research: Conduct, critique and utilization*. 4th ed. Philadelphia: WB Saunders.

Burton, N., Brundrett, M. and Jones, M. (2014). *Doing Your Education Research Project*. Thousand Oaks, CA: Sage Publications

Caggiano, C. (1999), 'The truth about Internet recruiting', Inc., vol.21, no.18, pp.156-157.

Caracelli, V. J., and Greene, J. C. (1997). Crafting mixed-method evaluation designs. In J.C. Greene and V. J. Caracelli (Eds.), *Advances in mixed-method evaluation: The challenges and benefits of integrating diverse paradigms* (pp. 19-32). San Francisco: Jossey-Bass.

Cardy R. L. and Miller J. S. (2005), *eHR and Performance Management: A consideration of positive potential and the dark side*. In Gueutal H. and Stone D. (Eds.), *The Brave New World of eHR: Human Resources in the Digital Age*, San Francisco: Jossey-Bass.

Caroll, J. M. (2007) *A Concise History of Hong Kong*. Rowman and Littlefield.

Cassell, C. and Symon, G. (1994) *Qualitative Methods In Organisational Research: A Practical Guide*, Sage, London

Chakrabortya, A.R. and Mansor, N.N. (2013) Adoption of Human Resource Information System: A Theoretical Analysis *Procedia - Social and Behavioral Sciences* 75 (2013) 473 – 478

Churchill, G. A. and Iacobucci, D. (2009) *Marketing research: methodological foundations*, Cengage Learning

CIPD Chartered Institute of Personnel and Development (2015). *Learning and Development 2015*

CIPD Chartered Institute of Personnel and Development (2013). *The role and purpose of learning and development (L&D)*

Clark, L., Huddleston-Casas, A., Churchill, L., Green, N. and Garrett, L. (2008) Mixed methods approaches in family science research, *Journal of Family Issues*, 29(11), pp. 1543-66.

Coghlan, D. (2003). Practitioner research for organisational knowledge: Mechanistic- and organistic-oriented approaches to insider action research. *Management Learning*, 34(4), 451-463.

Cohen, L., Manion, L., and Marrison, K. (2000). *Research methods in education*. (5th ed). London: Routledge.

Cohen, L., Manion, L. and Morrison, K. (2011). *Research Methods in Education*. (7thed.). London: Routledge.

Collis, J. and Hussey, R. (2003), *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*, Basingstoke, Hampshire, Palgrave Macmillan

Collis, J., and Hussey, R. (2009) *Business research: a practical guide for undergraduate & postgraduate students* Basingstoke, Hampshire [UK], Palgrave Macmillan.

Condrey, S. (2010). *Handbook of Human Resource Management in Government*. 3rd Edition: 726-728

Cooper, D. R. and Schindler, P. S. (2005) *Business Research Methods*. 9th edn. New York: Irwin McGraw-Hill.

Corbin-Dwyer, S. and Buckle, J. (2009) The space between: on being an insider-outsider in qualitative research, *International Journal of qualitative methods*, vol. 8 n. 18: 54-63

Creswell, J. (2003). *Research design: Qualitative, quantitative and mixed methods approaches (2nd ed.)*. Thousand Oaks, CA: SAGE Publications.

Creswell, J. (2009) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3rd Edition, Los Angeles: Sage Publications, Inc.

Creswell, J. (2012) *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*, 4th edition, Boston, MA: Pearson

CrossKnowledge, Fefaur and Ipsos (2015) www.crossknowledge.com/Learning+Tech/LMS+Platform

Crotty, M. (1998) *The foundations of social research: Meaning and perspective in the research process*. London: Sage Publications

Davidsson, P., (2013). Some reflection on research 'schools' and geographies. *Entrepreneurship & Regional Development*, 25(1-2), pp.100-110.

Davis, F.D. (1986). A technology acceptance model for empirically testing new end-user information systems: theory and results. Thesis. [Online]. Available from: <http://dspace.mit.edu/handle/1721.1/15192>.

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*. 13 (3). p.pp. 319–339

Davies, M. (2007) *Key Concepts in Social Research Methods*, New York, Palgrave, Macmillan LTD

Dawson, C. (2009). *Introduction to Research Methods: A practical Guide for Anyone Undertaking a Research Project*. (4th ed.). United Kingdom: How To Book Ltd.

- Day, C., Sammons, P., and Gu, Q. (2008). Combining qualitative and quantitative methods in research on teachers' lives, work, and effectiveness: From integration to synergy. *Educational Researcher*, 37(6), 330-342.
- Deetz, S. (2001). Conceptual foundations. In F. M. Jablin & L. L. Putnam (Eds.), *The new handbook of organizational communication: Advances in theory, research and methods* (pp. 3-46). Thousand Oaks, CA: Sage Publications.
- Della Porta, D. and Keating, M. (2013) *Approaches and Methodologies in the Social Sciences*. Cambridge University Press
- Denscombe, M. (2000). Social conditions for stress: young people's experience of doing GCSEs. *British Educational Research Journal*, 26 (3), 359-374.
- Denzin, N. and Lincoln, Y. (2000) *Handbook of Qualitative Research*, 2nd edition, Sage Publications
- Denzin, N. and Lincoln, Y. (2008) *The Landscape of Qualitative Research*, Thousand Oaks, CA: Sage
- Dery, K. and Wailes, N. (2005), Necessary but not sufficient: ERPs and strategic HRM. *Strat. Change*, 14: 265–272. doi:10.1002/jsc.727.
- Dery, K., Hall, R., Wailes, N., & Wiblen, S. (2013). Lost in translation? An actor-network approach to HRIS implementation. *The Journal of Strategic Information Systems*, 22(3), 225-237.
- Dessler, G. (2003). *Human Resource Management*, Pearson. Education, 9th Edition.
- De Vos, A. S., Strydom, H., Fouche, C. B., & Delport, C. S. L. (1998). *Research at grass roots*. Pretoria: Van Schaik.
- Dörnyei, Z. (2007) *Research methods in applied linguistics*. Oxford: Oxford University Press.
- Dörnyei, Z. (2010) *Questionnaires in Second Language Research: Construction, Administration, and Processing*, Routledge
- Dulebohn, J.H. & Marler, J.H. (2005). E-Compensation: The Potential to Transform Practice. *The Brave New World of eHR: Human Resources Management in the Digital Age*. (Eds.) Gueutal, H and Stone, D. San Francisco: John Wiley & Sons, Inc., pp:166-189.
- du Plessis, M. (2007) The role of knowledge management in innovation, *Journal of Knowledge Management*, Vol. 11 Issue: 4, pp.20-29, <https://doi.org/10.1108/13673270710762684>
- Easterby-Smith, M., Thorpe, R. and Lowe, A. (2002). *Management Research: An Introduction*, 2nd ed., London: SAGE Publications Ltd.

Easterby-Smith, M., Thorpe, R. and Jackson, P. (2008). *Management Research*. (3rd ed.). London: SAGE Publications Ltd.

Easterby-Smith, M., Thorpe, R. and Jackson, P. (2012) *Management Research*, 4th ed., London: SAGE Publications Ltd.

Eckhardt, A. Laumer, S. Maier, C. Weitzel, T. (2014) The Transformation of people, processes, and IT in E-Recruiting: Insights from an eight- year case study of a German media corporation. *Journal of Employee Relations*. Vol 36, Iss 4. PP 415-431

Elbanna, S. (2013). Processes and Impacts of Strategic Management: Evidence From the Public Sector in the United Arab Emirates. *International Journal of Public Administration*, 36(6), 426-439.

Epignosis LLC E- (2014) Learning, Concepts, Trends, Applications <https://www.talentlms.com/elearning/elearning-101-jan2014-v1.1.pdf>.

Eriksson, P. and Kovalainen, A. (2008) *Qualitative Methods in Business Research*, 1st ed, SAGE Publications Ltd., London

Farr J. L., Fairchild J., and Cassidy S. E. (2013), Technology and Performance Appraisal. In Coovert M. D. and Foster L. (Eds.), *The Psychology of Workplace Technology* (eBook), East Sussex: Routledge.

Fieser, J. and Dowden, B. (2006) *The Internet Encyclopedia of Philosophy* [online] [available at <http://www.iep.utm.edu>] [accessed: 3rd May 2016]

Fitch, A. (2013). Dubai reveals snapshot of its workforce. *The National*. [Online]. July 13.. Available from: <http://www.thenational.ae/business/travel-tourism/dubai-reveals-snapshot-of-its-workforce> [Accessed 23rd February 2016]

Fletcher, P. (2005). From Personnel Administration to Business-Driven Human Capital Management – The Transformation of the Role of HR in the Digital Age, in *The brave new world of E-HRM: Human Resource Management in the digital age*, Jossey-Bass.

Flowers, P. (2009). Research philosophies—importance and relevance. *European Journal of Information Systems*. v. 3 (2), pp. 112-126

Foddy, W. H. (1994) *Constructing questions for interviews and questionnaires: Theory and practice in social research*, Cambridge, UK: Cambridge University Press

Foster, S. (2009). Making sense of e-HRM: Technological frames, value creation and competitive advantage (unpublished Doctoral dissertation, University of Hertfordshire. UK).

- Gardner, S. D., Lepak, D. P., & Bartol, K. M. (2003). Virtual HR: The impact of information technology on the human resource professional. *Journal of Vocational Behavior*, 63(2), 159-179.
- Ghauri, P. and Grønhaug, K. (2005) *Research Methods in Business Studies*, 3rd ed, London: FT. Prentice Hall.
- Ghauri, P., Grønhaug, K. and Kristianslund, I. (1995) *Research methods in business studies: A practical study*, New York: Prentice Hall.
- Gilbert, G. Nigel. (1993) *Analyzing tabular data: Log linear and logistic models for social researchers*, London: UCL Press.
- Gilbert, N. (2008) *Researching social life*, 3rd edn, London: Sage Publications Ltd,
- Gilham, B. (2002) *Developing a Questionnaire (Real World Research)*, Continuum International Publishing
- Gill, J. (2001). Now Hiring: Apply on line, Business Week online. Retrieved from <http://www.businessweekonline.com>
- Gill, J. and Johnson, P. (2010). *Research Methods for Managers*. (4th ed.). London: SAGE Publications Ltd.
- Giovani Husen, M. and Maes, J. (2016) Introduction to Human Resource Management in Higher Education with Case Studies and Future Scenarios. <http://donau.booktype.pro/human-resource-management-in-higher-education-cases-studies-and-future-scenarios/human-resource-effectiveness-in-higher-education/>.
- Gliner, J. A. and Morgan, G. A. (2000). *Research Methods in Applied Settings: an Integrated Approach to Design and Analysis*. Mahwah, N.J.: Lawrence Erlbaum
- Global Information Technology Report 2015-2016
- Goldfarb, C 1990, *The SGML handbook*, Clarendon Press, Oxford.
- Greener, I. (2011) *Designing Social Research - A Guide for the Bewildered*, SAGE Publications Ltd
- Grinnell, R. and Unrau, Y. (2008) *Social Work Research and Evaluation: Foundations of Evidence-Based Practice*, New York, Oxford University Press
- Govindasamy, T. (2002) Successful implementation of e-learning: Pedagogical considerations. *Internet and Higher Education* 4(1): 287–299.
- Gowan, M.A. in Johnson, R. and Gueutal, H, (2011) *Transforming HR Through Technology: The Use of E-HR and HRIS in Organizations*. SHRM Foundation
- Gonzalez, R., Koizumi, D. and Kusiak, K. (2011) E-HRM and its outcomes: A study of relational e-HRM in multinational companies.,.

- Grant, R. and Vogt, E.M. (2015) Self-Efficacy as a Determinant of Information Technology Effectiveness. Society of Management and Human Resource Development IJMOS 4(4)
- Gray, D. E. (2014). Doing Research in the Real world. 3rd ed. SAGE Publication Ltd.
- Gray, K. (2015) Running head: E-Compensation 1 E-Compensation Course Hero <https://www.coursehero.com> › Strayer University, Washington DC › HRM › HRM 520
- Grix, J. (2004). The foundations of research. London: Palgrave Macmillan.
- Guba, E. G. (1981) Criteria for assessing the trustworthiness of naturalistic inquiries, *Educational Communication and Technology Journal*, 29, 75–91
- Guba, E. G., and Lincoln, Y. S. (1994) Competing paradigms in qualitative research. Handbook of qualitative research, 2(163-194), 105
- Gueutal, H.G. & Stone, D.L. (2005) (Eds.), The Brave New World of eHR: Human Resources Management in the Digital Age, San Francisco: Jossey Bass.
- Gupta, Y. (2016). Literature review on E-Recruitment: A step towards paperless HR. International Journal of Advance Research in Computer Science and Management Studies. Research Article / Survey Paper / Case Study. Available online at: www.ijarcsms.com
- Gupta, A., and Saxen, S. (2011). Employees' satisfaction towards e-HRM in service organizations. Gurukul Business review, 7, 41-52.
- Guthrie, G. (2010) *Basic research methods: An entry to social science research*, SAGE Publications India
- Hair, J. F., Money, A. H., Samuel, P. and Page, M. (2007). Research Methods for Business. England: John Wiley & Sons Ltd.
- Hallebone, E. and Priest, J. (2009). Business and management research: paradigms and practices. Palgrave Macmillan.
- Harris, T. E., & Nelson, M.D. (2008). Applied organizational communication: Theory and practice in a global environment. New York: Lawrence Erlbaum
- Harrits, G.S. (2011) More Than Method? : A Discussion of Paradigm Differences Within Mixed Methods Research, *Journal of Mixed Methods Research*, 5(2):150-166
- Hartas, D. (ed.). (2010). Educational Research and Inquiry: Qualitative and quantitative Approaches. London & New York: Continuum International Publishing Group.

Hartel, C., Fujimoto, V., Strybosch, V and Fitzpatrick, K. (2007). Human Resource Management: Transforming Theory into Innovative Practice (Pearson Education, Australia)

Hatch, M. J. and Cunliffe, A. L. (2006), *Organisation Theory*, 2nd ed, Oxford University Press, Oxford

Haworth, G. D. (1984) Social work research: Practice and paradigms. *Social Service Review*, 58, 343- 357

Hendrickson, A.R. (2003). Human resource information systems: Backbone technology for contemporary human resources. *Journal of Labour Research*, 24(3), 381-394, doi: <http://dx.doi.org/10.1007/s12122-003-1002-5>.

Henson, R. (2008). The Next Decade of HR: Trends, Technologies, and Recommendations, In Greutal and Stone: *The Brave New World of EHR* San Francisco, CA: Jossey-Bass, pp. 255-292.

Hoch, J. E. & Dulebohn, J. H. (2013) Shared leadership in enterprise resource planning and human resource management system implementation. In: *Human Resource Management Review*. 23, 1, p. 114-125 12 p.

Hockey, J. (1993) Research methods – researching peers and familiar settings, *Research Papers in Education*, 8 (2), 199-225.

Horton W. (2000). *Designing Web-based training: How to teach anyone anything anywhere anytime*. New York, NY: John Wiley & Sons.

Hu, P.J., Chau, P.Y.K., Liu, O.R. Sheng,,Y.. and Tam, K.R. (1999) Examining the Technology Acceptance Model Using Physician Acceptance of Telemedicine Technology. *Journal of Management Information Systems*, Vol. 16, No. 2 (Fall, 1999), pp. 91-112

Huang, J., & Martin-Taylor, M. (2013). Turnaround user acceptance in the context of HR self-service technology adoption: an action research approach. *The International Journal of Human Resource Management*, 24(3), 621-642.

Hussain, M. Ajmal, M. Khan, M. Saber, H. (2015) *Competitive Priorities and Knowledge Management: An Empirical Investigation of Manufacturing Companies in UAE*, *Journal of Manufacturing Technology Management*, Vol. 26 Iss:6. PP 791-806

Hussain, Z., Wallace, J., & Cornelius, N. E. (2007). The use and impact of human resource information systems on human resource management professionals. *Information & Management*, 44(1), 74-89.

Hussey, J. and Hussey, R. (1997). *Business Research: a practical guide for undergraduate and postgraduate students*. Macmillan: Basingstoke

Imperator, B. and DeMarco, M. (2009). Labour Processes Transformation". In Bondarouk, T., Oiry, E and Guiderdoni-Jourdain, K. (Eds.), Handbook of Research on E-Transformations and Human Resources Management Technologies. IGI Global, PA. USA, 34 - 54.

Iyenger, S. (1993). Assessing linguistic equivalence in multilingual surveys, London: UCL Press Limited.

Iwu, C.G., Ukandu, N. E. and Ile, C.A. (2016). Effects of the Use of Electronic Human Resource Management (EHRM) Within Human Resource Management (HRM) Functions at Universities. AUDA, vol. 8, no. 1/2016, pp. 5-20

James, M.A. (2006). The impact of technology on human resource management at the Breede Valley Municipality. Unpublished Master's Thesis, Stellenbosch University, South Africa.

Janesick, V. (2003). The choreography of qualitative research design. In Denzin and Lincoln (Eds.), Handbook of interview Research: Context and Method, Thousand Oaks, CA: Sage.

Jankowicz, A., (2000) Business Research Projects, 3rd Edition, Thomson Learning, London

Jankowicz, A.D. (2005) Business Research Projects, 4th Ed, London: Thomson Learning

Jennings, G., Ritchie, B., Burns, P. and Palmer, C. (2005) Interviewing: a focus on qualitative techniques. CAB International

Johnson, B. and Christensen, L. (2010). Educational Research: Quantitative, Qualitative, and Mixed Approaches. London: SAGE

Johnson, R.D., Lukaszewski, K.M., & Stone, D.L. (2015). The Evolution of the Field of Human From digital HRM to firm performance 58 Resource Information Systems: Co-Evolution of Technology and HR-Processes. Communications of the Association for Information Systems, 38, 1-37.

Johnson, R. B., and Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26

Johnson, R. D. and Gueutal, H.G. (2011). Transforming HR through Technology the Use of E-HR and HRIS in Organizations. SHRM Foundation

Jolliffe, A., Ritter, J. and Stevens, D. (2001). The online learning handbook: developing and using web based learning. London: Kogan Page.

Jones, M. and Brader-Araje, L. (2002). The Impact of Constructivism on Education: Language Discourse, and Meaning. American Communication Journal, Vol. 5: 3.

- Jonsson, E. (1998). An Integrated Framework for Security and Dependability. Paper presented at the NSPW, Charlottesville, VA, USA.
- Kamal, F. and Kumar, A. (2013). Impact of Technology Advancement on Human Resource Performance International Journal on Arts, Management and Humanities 2(2): 43-47(2013). ISSN No. (Online): 2319 – 5231
- Kaplan-Leiserson, E. (2002) E-learning glossary. Retrieved August 11, 2014, from <http://www.learningcircuits.org/glossary.html>
- Karakanian, M. (2000). Are human resources departments ready for e-HR? Information Systems Management, 17 (4), p. 36.
- Kavanagh M., Gueutal H. G., and Tannenbaum S. (1990) Human resource information systems: Development and application. Boston: Kent Publishing, 1990.
- Kearsley G., (2000). Online education: Learning and teaching in cyberspace. Belmont, CA: Wadsworth.
- Kehoe, J., Dickter, D., Russell, D., & Sacco, J. In D. Stone (Chair) e-HR: The Impact of Technology on Human Resource Processes. A symposium presented at the annual meeting of the Society for Industrial and Organizational Psychology, Los Angeles, CA, 2005.
- Kervin, J.B. (1992) *Methods for Business Research*, Harper Collins Publishers
- Kettley, P and Reilly, P (2003). e-HR: An introduction, Report No 398, Brighton, Institute for Employment Studies
- Khan. B. (2001) Web-based training. Englewood Cliffs, NJ: Educational Technology Publications
- Kidron, A., S. Tzafrir, I. Meshulam, and R. D. Iverson. (2013). "Internal integration within human resource management subsystems." Journal of European Journal of Applied Business Management, 1 (1), 2015, pp.1-18 ISSN 2183-5594
- Kovach, K., Hughes, A., Fagan, P. & Maggitti, P. (2002) Administrative and strategic advantages of HRIS. Employment Relations Today, 29, 2, 43-48.
- Knoll, K., and Jarvenpaa, S. L. (1994). Information Technology Alignment or "Fit" in highly turbulent environments: The Concept of Flexibility. Paper presented at the SIGCPR 94, Alexandria, Virginia, USA.
- Kuipers M. (2017:10). Implement e-HRM successfully? A study into the criteria to successfully implement e-HRM. University of Twente <http://essay.utwente.nl/71819/>
- Kumar, R. (1999). Research Methodology: A step-by-step guide for beginners, London: SAGE publications

Kumar, R. (2005). *Research Methodology*. (2nd ed.) London: SAGE Publication Ltd

Kumar, R. (2014). *Research Methodology: a step-by-step guide for beginners*. (4th Ed.). London: SAGE Publication Ltd.

LaMorte, W.W. (2016) *Theory of Planned Behaviour: An HC3 Research Primer*. Boston University School of Public Health. Health Communication Capacity Collaborative <http://sphweb.bumc.bu.edu/otlt/MPHModules/SB/BehavioralChangeTheories/BehavioralChangeTheories3.htm> accessed 28-3-17

Lanvin, B. and Evans, P. (2015) Eds. *The Global Talent Competitiveness Index 2015-16*. INSEAD (2015): *The Global Talent Competitiveness Index 2015-2016*, Fontainebleau, France.

Lee, I. (2011). Modeling the benefit of e-recruiting process integration. *Decision Support Systems*, 51(1), 230-239.

Leech, N. L. and Onwuegbuzie, A. J. (2009) A typology of mixed methods research designs. *Quality & Quantity: International Journal of Methodology*, 43, 265-275.

Lengnick-Hall, C. A. & Lengnick-Hall, M. L. (2006). HR, ERP, and competitive advantage. *Human Resource Management*, 45, 179-194.

Lengnick-Hall, M. L., & Moritz, S. (2003). The impact of e-HR on the human resource management function. *Journal of Labor Research*, 24(3), 365-379

Lepak, D.P. and Snell, S.A. (1998), Virtual HR: strategic human resource management in the 21st century, *Human Resource Management Review*, Vol. 8 No. 3, pp. 215-34.

Levy, P. and Lemeshow, S. (2011) *Sampling of Populations: Methods and Applications, 4th Edition*, John Wiley & Sons

Ma, L., & Ye, M. (2015). The Role of Electronic Human Resource Management in Contemporary Human Resource Management. *Open Journal of Social Sciences*, 3(04), 71.

Mahinda, E., & Whitworth, B. (2005) *The Web of System Performance: Extending the TAM Model*. Paper presented at AMCIS (Americas Conference on Information Systems) August 11-14, Omaha, Nebraska, USA

Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2013). Analyzing the impact of HRIS implementations on HR personnel's job satisfaction and turnover intention. *The Journal of Strategic Information Systems*, 22(3), 193-207.

Manidipa, R (2015) *E-Compensation* In [slidesharehttp://www.slideshare.net/rakeshm11/e-compensation-51396254](http://www.slideshare.net/rakeshm11/e-compensation-51396254) Published on Aug 7, 2015

Mark, M., Henry, G.T. and Julnes, G. (2000): Evaluation: An Integrated Framework for Understanding, Guiding, and Improving Public and Nonprofit Policies and Programs, Jossey-Bass, San Francisco.

Marler, J. H. (2009). Making human resources strategic by going to the net: reality or myth?. *The International Journal of Human Resource Management*, 20(3), 515-527.

Marler, J. H., & Fisher, S. L. (2013). An evidence-based review of e-HRM and strategic human resource management. *Human Resource Management Review*, 23(1), 18-36.

Marler, J. H., & Parry, E. (2015). Human resource management, strategic involvement and e-HRM technology. *The International Journal of Human Resource Management*, 1-21. DOI: 10.1080/09585192.2015.1091980

Marshall, C. and Rossman, G. B. (1989). *Designing qualitative research*. Newbury Park, CA: Sage

Martin, G. and Reddington, M. (2010) Theorising the links between e-HR and strategic HRM: a model, case illustration and reflections. *International Journal of Human Resource Management*, 21(10), pp. 1553-1574. (doi:10.1080/09585192.2010.500483)

Martin, G., Reddington, M. and Alexander, H. (2008) 'Technology, outsourcing, and HR transformation: an introduction', *Technology, Outsourcing and Transforming HR*, pp.1-35, Oxford, UK: Elsevier.

Martinsons, M.G. (1994). Benchmarking human resource information systems in Canada and Hong Kong. *Information & Management*, 26, 305-16

Masum, A.K.M (2015) Adoption Factors of Electronic Human Resource Management (e-HRM) in Banking Industry of Bangladesh. *Journal of Social Sciences / Sosyal Bilimler Dergisi* . May2015, Vol. 11 Issue 1, p1-6. 6p.

Maynard, M. (1994). Methods, practice and epistemology: The debate about feminism and research. *Researching women's lives from a feminist perspective*, 10, 26

McManus, M. A., & Ferguson, M. W. (2003). Biodata, personality, and demographic differences of recruits from three sources. *International Journal of Selection and Assessment*, 11, 175–183.

Mellahi, K. and Budwhar, P.S. (2006) Human Resources in the Middle East: Emerging HRM models and Future challenges for Research and Policy. *Managing Human Resources in the Middle East*. Abingdon, UK: p. 291-301

Menacere, K. (2016) When more does not mean better – Selecting a Research methodology and methods, In: Ahmed, V., Opoku, A. and Aziz, Z., *Research*

Methodology in the Built Environment: A Selection of Case Studies, New York, Routledge

Mercer, J. (2007) The challenges of insider research in educational institutions: wielding a double-edged sword and resolving delicate dilemmas, *Oxford Review of Education*, 33 (1), pp. 1-17.

Miles, M. B. and Huberman, M. (1994) *Qualitative data analysis: an expanded sourcebook* (2nd edition). 1994. London: Sage.

Moore, N. (2006). *How to Do Research. The practical guide to designing and managing research projects*. 3rd edition. Facet Publishing

Mottl, J. (1998), 'Want to find workers? Go online many IT job seekers flock to the Web; managers may soon follow', *Internetweek*, vol.728, pp. 20-21.

Nachmias, C. and Nachmias, D. (1996) *Research Methods in the Social Sciences*. Fifth Edition, Arnold, London.

Nastasi, B., Hitchcock, J., Sarkar, G., Burkholder, K., Varjas, and Jayasena, A. (2007). Mixed methods in intervention research: Theory to adaptation. *Journal of Mixed Methods Research*. v. 1 (2), pp. 164-82.

National Media Council (2013) nmc.gov.ae/en-us. [Accessed 33 February 2017]

Neergaard, H. and Ulhoi, J.P. (2007) *Handbook of Qualitative Research Methods in Entrepreneurship*, Edward Elgar Publishing Limited, United Kingdom

Nel, P.S.; Werner, A.; Haasbroek, G.D.; Poisat, P.; Sono, T. & Schultz, H.B. (2008). *Human Resources Management*, 7th Edition. Oxford, Cape Town.

Nenwani, P. and Raj, M. (2013) E-HRM Prospective in Present Scenario. *International Journal*, 1(7), 2013.

Neuhauser, C. (2002). Learning style and effectiveness of online and face-to-face instruction. *The American Journal of Distance Education*, 16(2): 99-113.

Neuman, W. L. (2011). *Social Research Methods: Qualitative and Quantitative Approaches*. (7th ed.). United States of America: Pearson Education.

Nunan, D. (2006). *Research Methods in Language Learning*. (6th ed.). New York: Cambridge University Press

Official Yearbook of the UAE (Yearbook, 2013 <https://www.mofa.gov.ae/EN/Documents/3556.pdf>)

O'Leary, A. (2004) *The Essential Guide to Doing Research*. London: SAGE Publications

Olivas-Lujan, R., & Zapata-Cantu, L. (2007). E-HRM in Mexico: Adapting innovations for global competitiveness, *International Journal of Manpower*, 28(5), 418-434. http://dx.doi.org/10.1108/0143772_0710778402

Oliver, P. (2010). *Understanding the Research Process*. SAGE Publication Ltd.

Olson, D.H. (1977) Insiders' and outsiders' views of relationships: research studies, In: G. Levinger and H. L. Rausch (Eds) *Close relationships: perspectives on the meaning of intimacy*, Amhurst, University of Massachusetts Press

Oppenheim, A. N. (2000) *Questionnaire Design, Interviewing and Attitude Measurement*, New ed., London: Continuum.

Optimus learning services (2103) Learning and Talent Development www.optimuslearningservices.com/The L&D Blog.L&D industry news

Paauwe, J, Farndale, E & Williams, R (2005), 'Web-Based Organizing in Traditional Brick and-Mortar Companies: The Impact on HR', in *e-Human Resources Management: Managing Knowledge People*, eds T. Torres-Coronas, T. & Arias-Oliva, M. pp. 31-67.

Panayotopoulou, L. (2010). Adoption of Electronic Systems in HRM: Is National Background of the Firm Relevant? *New Technology, Work and Employment*, Vol. 25, Issue 3, pp. 253-269, November 2010

Panayotopoulou, L., Vakola, M., & Galanaki, E. (2007). E-HR adoption and the role of HRM: Evidence from Greece. *Personnel Review*, 36, 277–294.

Pant, S., Chatterjee, A. and Jaroliya, D. (2012). E-HRM Systems Implementation: A Conceptual Framework. *IMJ Volume 4 Issue 1 April-June, 2012*

Parry, E. (2011). An examination of e-HRM as a means to increase the value of the HR function. *The International Journal of Human Resource Management*, 22(05), 1146-1162.

Parry, E. and Strohmeier, S. (2014) HRM in the digital age – digital changes and challenges of the HR profession, *Employee Relations*, Vol. 36 Issue: 4, <https://doi.org/10.1108/ER-03-2014-0032>

Parry, E. and Tyson, S. (2011) Desired goals and actual outcomes of e-HRM. *Human Resource Management Journal*, 21(3), pp.335-354, 2011

Parry, E., & Tyson, S. (2010). Desired goals and actual outcomes of e-HRM. *Human Resource Management Journal*, 21(3), 335-354. Raymond, L. (1985). Organizational characteristics and MIS success in the context of small business. *Mis Quarterly*, 37-52.

Parry, E., Tyson, S., Selbie, D., & Leighton, R. (2007). *HR and Technology: Impact and Advantages*. London: Chartered Institute of Personnel and Development.

Paulsen, M. F. (2003). Online Education and Learning Management Systems. Global e-learning in a Scandinavian perspective. Oslo: NKI Forlaget.

Payne, G. and Payne, J. (2004). Key Concepts in Social Research. London: SAGE Publication Ltd.

Picciano, A. (2001) Distance Learning (making connections across virtual space and time), Prentice-Hall. Inc, New Jersey. Int. J. Instr. Media 32(2):143-156.

Polit, D. F., & Hungler, B. P. (1999). Nursing research: principles and methods. Philadelphia: JB Lippincott Company

Punch, K. F. (2005). Introduction to Social Research: Quantitative and Qualitative Approaches. (2nd ed.). London: SAGE Publication Ltd.

Punch, K. F. (2006). Developing Effective Research Proposals. (2nd ed.). London: SAGE Publication Ltd.

Rees, C. and Althakhri, R. (2008) Organisational Change Strategies in the Arab Region: A Review of Critical Factors. Journal of Business Economics and Management, Vol. 9(2): 123-132.

Rees, C., Mamman, A. and Bin Braik, A. (2007) Emiratization as a strategic HRM change initiative: Case study evidence from UAE petroleum company, The International Journal of Human Resource Management, 18(1): 33–53

Remenyi, D., and Williams, B. (1998) *Doing research in business and management: an introduction to process and method*. London: Sage Publications

Riazi, A.M. and Candlin, C.N. (2014) 'Mixed-methods research in language teaching and learning: Opportunities, issues and challenges', Language Teaching, 47(2), pp. 135–173

Ritchie, J. and Lewis, J. (2003) Qualitative research practice - A Guide for Social Science Students and Researchers, London: Sage

Robson, C. (2002) *Real world research: a resource for social scientists and practitioner-researchers*. Oxford: Blackwell

Robson, C. (2003) *Real world research: a resource for social scientists and practitioner-researchers*, 2nd ed. Oxford: Blackwell

Robson, C. (2011) *Real world research: a resource for social scientists and practitioner-researchers*, 3rd ed. Chichester: Wiley

Rogers, E.M. (2003). Diffusion of Innovations (5th ed.) New York: Free Press.

Rogers, E. M. (1983). Diffusion of Innovation (2nd ed.) New York: Free Press.

Rosenberg, M. (2001). E-Learning: Strategies for Delivering Knowledge in the Digital Age. The Knowledge management magazine series

- Rothwell, W. J. (2005). *Effective Succession Planning* (3rd ed.). New York, NY: Amacom.
- Rothwell, W. J. (2010). *Effective Succession Planning* (4th ed.). New York, NY: Amacom.
- Rothwell, W. J. (2011). *Invaluable knowledge: Securing your company's technical expertise*. New York, NY: Amacom.274
- Rubin, A., and Babbie, R. (2009). *Essential research methods for social work*, 2nd edition, Cenage Learning, USA
- Rubin and Rubin (1995) *Qualitative interviewing: the art of hearing data* London: Sage Publications
- Ruël, H. & Bondarouk, T. (2014). E-HRM research and practice: facing the challenges ahead. In *Handbook of strategic e-Business management* (pp. 633-653). Springer Berlin Heidelberg.
- Ruël, H., and Bondarouk, T (2013). Introduction. *European J. International Management*, Vol. 7, No. 4, 2013, 369 – 372
- Ruël, H., Bondarouk, T. and Van der Velde, M. (2007) "The contribution of e-HRM to HRM effectiveness: Results from a quantitative study in a Dutch Ministry", *Employee Relations*, Vol. 29 Iss: 3, pp.280 – 291
- Ruel H., Bondarouk, T. and Looise, J. (2004) „E-HRM: Innovation or Irritation: An Explorative Empirical Study In Five Large Companies On Web-Based HRM“, *Management Review*, 15(3), 364-381.
- Ruël, H. and van der Kaap, H. (2012) “E-HRM Usage and Value Creation. Does A Facilitating Context Matter?”. *Zeitschrift für Personal Forschung*, 26 (3), pp: 260-281.
- Russell, T. (1999). *The no significant difference phenomenon as reported in 355 research reports, summaries and papers*. Raleigh, N.C.: North Carolina State University.
- Ruta, C.D. (2005). The application of change management theory to the HR portal implementation in subsidiaries of multinational corporations. *Human Resource Management*, Vol. 44, No. 1, pp. 35-53.
- Ryan, S. (2000). *The virtual university: the Internet and resource-based learning*. London; Sterling, VA: Kogan Page.
- Ryan, G., and Bernard, H. R. (2000). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 769-802). London: Sage.

Saleh, M. (2014) Factors Affecting the Acceptance of Electronic Human Resource Management System in Palestinian Service Sector. MSc in Engineering Management, Faculty of Graduate Studies, An-Najah National University, Nablus, Palestine

Sanayei, A. and Mirzaei, A. (2008), Designing a model for evaluating the effectiveness of E-HRM (case study: Iranian organizations) II, *International Journal of Information Science and Technology* 6(2) pp.79-98

Sarantakos, S. (1998) *Social Research*, 2nd edition, Basingstoke, Macmillan

Sareen, P. (2015). A Study of Employee Satisfaction towards e-HRM system *European Journal of Applied Business Management*, 1 (1), 2015, pp.1-18

Saunders, M. (2012). Choosing research participants. In G. Symon, and C. Cassell (Eds.), *The practice of qualitative organisational research: Core methods and current challenges* (pp. 37-55). London, England: Sage

Saunders, M., Lewis, P., and Thornhill, A. (2000). *Research Methods for Business Students*, London

Saunders, M., Lewis, P., and Thornhill, A. (2003) *Research method for business students*, 3rd edition. New York: Prentice Hall

Saunders, M., Lewis, P. and Thornhill, A. (2007). *Research methods for business students*, 4th edition, Prentice Hall.

Saunders, M.; Lewis, P.; Thornhill, A. (2009) *Research Methods for Business Students*, 5th ed. Harlow: Prentice Hall.

Saunders, M., Lewis, P. and Thornhill, A. (2012). *Research Methods for Business Students*. (6th ed.). Harlow: Pearson Education Limited.

Saunders, M. and Lewis, P. (2012). *Doing Research in Business and Management: as Essential Guide to Planning Your Project*. England: Pearson Education Limited.

Saunders, M. and Rojon, C. (2011). On the attributes of a critical literature review. *Coaching: An International Journal of Theory, Research and Practice*, 4(2), 156-162.

Schüßler, E. (2008): Implementing E-HRM. A structurational approach to investigating technological and organisational change. In: Martin, G./ Reddington, M./Alexander, H. (Eds.) *Technology, Outsourcing and Transforming HR. Potential, Problems and Guidance for Practitioners*. Oxford: Elsevier. 257-287.

Schraw, G. (2013). Conceptual integration and measurement of epistemological and ontological beliefs in educational research. Hindawi Publishing Corporation. v. 2013, pp. 1-19.

Sekaran, U. (2000) *Research method for business: A skill building approach*, John Wiley & Sons

Sekaran, U. (2003). *Research Methods for Business – A Skill Building Approach*. (4th ed.) NJ, John Wiley & Sons.

Selim H.M. (2007) Critical success factors for e-learning acceptance: Confirmatory factor models. *Computers & Education* 49 (2007) 396–413

Sheikh Mohammed bin Rashid Al Maktoum Speech given in January 2017. 999 Magazine Security and Safety for All. Abu Dhabi – UAE www.moi.gov.ae

Shilpa, V. and Gopal. R. The Implications of Implementing Electronic-Human Resource Management (E-HRM) Systems in Companies. *Journal of Information Systems and Communication*, [online] 2(1), pp.10-29. Available at: <http://www.bioinfo.in/contents.php?id=45> [Accessed 15 Aug. 2014], 2011.

Silverman, D. (2011) *Interpreting Qualitative Data: A Guide to the Principles of Qualitative Research*, 4th Ed, Sage Publications, London.

Silverman, D. (1993) *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction*, London: Sage.

Smith, M. L. (2006). Multiple methods in education research. In J. Green, G. Camilli & P. Elmore (Eds.), *Handbook of complementary methods in educational research* (pp. 457-475). Mahwah, NJ: Lawrence Erlbaum Associates Inc.

Snell, S., Stuebner, D. & Lepak, D. (2002). Virtual HR departments: Getting out of the middle. In Henneman, D (Ed.) *Human Resource Management in virtual organisations*. Greenwich: Information Age Publishing.

Srivastava, S., (2010), "Shaping organizations with e-HRM" *International journal of innovation management and technology*, Vol.1 No.1, pp. 47-50

Stange, K., Crabtree, B. and Miller, W. (2006) Multimethod Research, *Annals of Family Medicine*, Vol. 4, pp 292- 294

Stanton, J.M. and Coover, M.D. (2004), Turbulent waters: the intersection of information technology and human resources, *Human Resource Management*, Vol. 43 No. 2, pp. 121-6.

Statistics Centre Abu Dhabi (SCAD 2015) <https://www.scad.ae/en/pages/default.aspx> Accessed 33 May 2017

Stone, D. L., Deadrick, D. L., Lukaszewski, K. M., & Johnson, R. (2015). The influence of technology on the future of human resource management. *Human Resource Management Review*, 25, 216–231.10.1016/j.hrmr.2015.01.002

Stone, D.L. and Dulebohn, J.H. (2013). Emerging issues in theory and research on electronic human resource management (eHRM). Volume 23, Issue 1, March 2013, Pages 1-5

Stone, D. and Dulebohn, (2013) J. Emerging issues in theory and research on electronic human resource management (eHRM). Human Resource Management Review, 23(1), pp.1-5

Stone, D.L. and Lukaszewski, K.M. (2009). An expanded model of the factors affecting the acceptance and effectiveness of electronic human resource management systems. Human Resource Management Review 19 (2009) 134–143

Stone, D. Lukaszewski, K., Stone-Romero, E. and Johnson T. (2013) Factors affecting the effectiveness and acceptance of electronic selection systems. Human Resource Management Review 23 (2013) 50–70

Stone, D., Stone-Romero, E. and Lukaszewski, K. (2006). Factors affecting the acceptance and effectiveness of electronic human resource systems. Human Resource Management Review 16 (2006) 229–244

Stone, D. L., Stone-Romero, E. F., & Lukaszewski, K. (2003). The functional and dysfunctional consequences of human resource information technology for organizations and their employees. In D. Stone (Ed.), *Advances in human performance and cognitive engineering research*. Greenwich, CT: JAI Press, 2003.

Strauss, A. and Corbin, J. (1998) *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage Publications, Inc.

Strohmeier, S. (2007) Research in e-HRM. Review and implications. HRM Review, Vol. 17, No. 1, pp.19-37

Strohmeier, S. (2009). Concepts of e-HRM consequences: a categorisation, review and suggestion. *The International Journal of Human Resource Management*, 20(3), 528-543.

Strohmeier, S. & Kabst, R. (2014). Configurations of E-HRM – an Empirical Exploration. *Employee Relations*, 36 (4), pp. 333 – 353.

Suchitra, P. (2014). E-HRM: Conceptual Implications. *International Journal of Human Resource Management and Research (IJHRMR)*. ISSN(P): 2249-6874; ISSN(E): 2249-7986. Vol. 4, Issue 2, Apr 2014, 31-38

Suramardhini M., (2012), “E-HRM Paper Presentation”, ebstudies.

Swaroop, K. (2012) e-hrm and how it will reduce the cost in organisation. *Asia Pacific Journal of Marketing & Management Review*_ISSN 2319-2836 Vol.1 (4), December (2012) Sri Venkateswara University, Tirupati, A.P - 517502, India.

Sylvester, E.O. Bamidele, A.D. and Oluyemi, O.S. (2015) Implementing E-HRM System in Developing Countries: Challenges and Prospects International Journal of Applied Information Systems (IJ AIS) – ISSN : 2249-0868 Foundation of Computer Science FCS, New York, USA Volume 9 – No.8, October 2015 – www.ijais.org 38

Tansley, C., Kirk, S., Williams, H., & Barton, H. (2014). Tipping the scales: Ambidexterity practices on e-HRM projects. *Employee Relations*, 36, 398–414.

Tashakkori A. and Teddlie C. (2003) *Handbook of mixed methods in social and behavioral research*. Sage, Thousand Oaks, CA

Taylor, S. J. and Bogdan, R. (1984) *Introduction to qualitative research methods: the search for meanings*, 2nd ed, Wiley, New York

Teddlie, C. and Tashakkori, A. (2009) *Foundations of Mixed Methods Research*. Thousand Oaks, CA: Sage Publications.

Theaker, M. & Vernon, P. (2006) Removing the barriers to success in HR transformation. Mercer Consulting, available online at <http://www.mercerhr.com/knowledgecenter/reportssummary.jhtml/dynamic/idContent/1235040> Accessed July 2017

Thiétart, R. (2001) *Doing management research a comprehensive guide*; Sage Publications, London

Thite, M. (2013). Ethics and human resource management and development in a global context: case study of an Indian multinational, *Human Resource Development International*, Vol. 16, No. 1, pp. 106-115.

Thorpe, M. R. (2013). The Process of Conducting Qualitative Research as an Adjunct to the Development of Therapeutic Abilities in Counselling Psychology. *New Zealand Journal of Psychology*, 42(3), 35-43

Toledo, H. (2013). The political economy of Emiratization in the UAE", *Journal of Economic Studies*, Vol. 40,1, Pp. 39-53.

Totolici, A., Popescu, C., Sofia Totolici, C. and Lukacs, E. Modeling a trend Pattern for E-HRM Budgets' Dynamics: Evidence from a Case Study Based on a Romanian Software Firm", published in *International Journal of Academic Research in Business and Social Sciences*, HRMARS, vol. 3, no.7, July 2013, 98-109

Trochim, W. M. K. (2006) *Variables*. Web Center for Social Research Methods [online] [available at <http://www.socialresearchmethods.net/kb/variable.php>] [accessed: 22th April 2016]

UAE Government official portal (2015) <https://government.ae/en>. Accessed 27th January 2017

UAE Interact (2015) www.uaeinteract.com/news/default3.asp?ID=234. 29 July

UAE Interact (2014) Ministry of Finance announces e-connection of Abu Dhabi Government, Federal Financial Systems. Available: <http://www.uaeinteract.com/news/default3.asp?ID=143>, accessed on 20th April 2014.

UAE Vision 2021 <https://www.vision2021.ae/en>

Ulrich, D. and Dulebohn, J (2015). Are we there yet? What's next for HR? *Journal of Human Resource Management Review*. Vol 25, Issue 2. P: 178-186

Ultanir, E. (2012) An Epistemological Glance at the Constructivist Approach: Constructivist Learning in Dewey, Piaget, and Montessori, *International Journal of Instruction*, Vol.5, No.2

Upperapally, P. (2015) E-learning-advantages. <https://blog.commlabindia.com/elearning-design/popular-elearning-advantages>.

Unluer, S. (2012) Being an Insider Researcher While Conducting Case Study Research, *The qualitative Report*, 17(58), pp1-14.

Venkatesh, V., Davis, F.D. and Morris, M.G. (2007): Dead or alive? The development, trajectory and future of technology adoption research. *Journal of the association for information systems* 8.4 -267.

Vidot, J. (2000), 'Online Recruitment: Taking the Plunge', http://www.gradlink.edu.au/gradlink/employer/e_onlineartic.htm Accessed date: Nov. 2016.

Viswanath, V. (2000). Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model *Information Systems Research* 200011:4, 342-365

Voermans M. & Van Veldhoven, M. (2007). Attitude towards e-HRM: an empirical study at Philips. *Personnel Review*, Vol. 36, No. 6, pp. 887-902.

Walker, A. J. (2001). How the Web and Other Key Trends Are Changing Human Resources", In Alfred J. Walker, ed. *Web-Based Human Resources* (New York: McGraw-Hill, 2001).

Wallace, R. M. (2000). Online learning in higher education: A review of research on interactions among teachers and students. *Education, Communication & Information*, 3, 241-281.

Waring T. (2004). Communicating the complexity of integrating information systems: a case study of the procurement of a payroll-personnel system. *Int. J. Human Resources Dev Manag*:4: 431–48.

Watson, W. (2002). Getting Results along the Journey - 2002 survey report.

Retrieved August 16, 2010 from www.watsonwyatt.com

Weaver, D. (2008). Academic and student use of a learning management system: Implications for quality. *Australasian Journal of Educational Technology*, 24(1), 30

Webster, M. (1985). *Webster's New Collegiate Dictionary*. Meriam - Webster Inc.

Welsh, E. T., Wanberg C. R., Brown, K.G. and Simmerin M. J. (2003). E-learning: emerging uses, empirical results and future directions. *International Journal of Training and Development*. Volume 7, Issue 4, pages 245–258

Williams, J. (2011). *Research Paradigm and Philosophy*. Dissertation writing tips: How to write a complete dissertation [online] [available at: <http://www.howtodo.dissertationhelpservice.com>] [accessed: 22nd October 2016]

Withers, M., Williamson, M. and Reddington, M. (2010) *Transforming HR Creating Value Through People*. 2nd edition. London. Elsevier

Wood, M. and Welch, C. (2010). *Are 'Qualitative' and 'Quantitative' Useful Terms for Describing Research?* A Portsmouth University Business School, University of Portsmouth Methodological Innovations Online (2010) 5(1) 56-71.

Wright, P.M. & Dyer, L. (2000). People in e-business: new challenges, new solutions. Center for Advanced Human Resource Studies. Working paper 00-11. New York: Cornell University. Ithaca, NY.

Wright, P. M., Gardner, T. M., Moynihan, L. M., & Allen, M. R. (2005). The Relationship between HR Practices and Firm Performance: Examining Causal Order. *Personnel Psychology*, 58(2), 409-446. 33

Yamane, T. (1967). *Statistics, an Introductory, Analysis*. (2nd ed.). New York: Harper and Row.

Yin, R. (2003) *Case Study Research: Design and Methods*, Beverly Hills, CA: Sage Publications

Yin, R. (2009) *Case study research: Design and methods* (4th ed). Thousand Oaks, CA: Sage.

Yin, R. K. (2012). *Applications of case study research* (3rd ed). Thousand Oaks, CA: Sage.

Yusliza M. Yusoff, Y. M., Ramayah, T., and Othman, N. (2015). "Why Examining Adoption Factors, HR Role and Attitude towards Using E-HRM is the Start-Off in Determining the Successfulness of Green HRM?," *Journal of Advanced Management Science*, Vol. 3, No. 4, pp. 337-343, December 2015. doi: 10.12720/joams.3.4.337-343

Zafar, J. (2012) "An Analysis of E-Human Resource Management Practices: A Case Study of State Bank of Pakistan", *European Journal of Social Sciences* .Vol. 15, Number 1.

Zisiadis M. (2015). Human Resource Management with Information Technology: A Systematic Literature Review, Department of Informatics IT Management.

Zohrabi, M. (2012). An introduction to course and/or program evaluation. *Journal of Pan-Pacific Association of Applied Linguistics*, 15(2), 59-70



Student's name: Bakheet AlAmeri

Liverpool Business School

Questionnaire

"I have read the information sheet provided and I am happy to participate. I understand that by completing and returning this questionnaire I am consenting to be part of this research study and for my data to be used as described in the information sheet provided"

Section 1- General information

(a) Please indicate your gender

Male ☐ Female ☐

(b) Please indicate your age group (years)

20 or under ☐ 21 – 30 ☐ 31 – 40 ☐
41 – 50 ☐ 51 – 60 ☐ other, please specify

(c) Please indicate your level of education

High school ☐ Diploma ☐ Bachelor ☐
Masters ☐ Doctorate ☐ Other, please specify

(d) Please indicate your total years of service (in Abu Dhabi ,)

5 or Less ☐ 6 – 10 ☐ 11 – 15 ☐
16 – 25 ☐ Over 25 years ☐ Prefer not to say ☐

(e) What is your department?

HR ☐ Finance ☐ Operations ☐
Guards ☐ Central ops ☐ Ports ☐

Section 2 - Transition from HRM to e-HRM

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't know
Management is committed to implementing e-HRM						
Management supports the implementation of e-HRM						
Management is capable of implementing e-HRM systems						
Our department has a clear, comprehensive vision to implement e-HRM systems						
There is readiness for adopting to e-HRM within our department						
There is general acceptance for the transition to e-HRM within our						
The Abu Dhabi , Department has innovative culture/flexible structure						
Our organisation has put in place regular training programmes for employees to cope with the transition to e-HRM						
There is enough human resource to implement e-HRM system						
There is sufficient skilled workforce available to implement e-HRM						
The need of adopting to e-HRM system is being introduced by top management						
An adequate change management strategy is in place for the Transformation to e-HR						
Our organisation has an action plan to implement the change during the implementation of e-HRM						
There is constant communication through appropriate medium at all levels to ensure implementation of e-HRM is successful						

Section 3 - Challenges of technology resources/facilities

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't know
IT infrastructure is ready for the implementation of e-HRM						
IT infrastructure accommodates integration within the organisation to support the change						
There is ample availability of internet connection in the Abu Dhabi , Department						
Our organisation provides all needed hardware and equipment necessary for value creation by e-HRM						
There is an sufficient technological infrastructure within our organisation						

Section 4 - Barriers of implementing e-HRM

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't know
Top management has not shown support/commitment for the implementation of e-HRM						
Employee's attitude towards adoption or implementation of e-HRM is not favourable						
Change process is highly affected due to lack of readiness for the proposed e-HRM system						

The implementation strategy is not very well planned/organised						
The goals of the implementation of e-HRM systems are unclear						

Section 5 - Staff Readiness and empowerment for eHRM

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't Know
People are not consulted on the e-HRM implementation strategy						
The reasons, outcomes and benefits of implementing e-HRM are not well explained						
It is very complex to get specialization and adequate number of staff						
Poor IT infrastructure such as unavailability or unreliability of internet connections makes implementation of e-HRM more difficult						
Implementation of e-HRM is not compatible with my department's IT infrastructure						
Poor technical infrastructure (e.g. electricity, telephone lines etc.) hinders the implementation of e-HRM						
There is insufficient technical capability to implement e-HRM effectively						

Section 6 - Key issues that affect the implementation of the e-HR system

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Don't know
Inadequate technical infrastructure (e.g. electricity, telephone lines etc.) to implement change effectively						
Insufficient and obsolete operational equipment makes it difficult to deliver improved services						
Our organisation encounter difficulties when there is a need for coordination with other organisations						
We face difficulties/delay whenever we try to get necessary data or information from outside the organisation						
Insufficient support/assistance from political leadership makes it difficult to carry-out organisational development Programmes						
The e-HRM implementation process is not adequately funded						
A weak legislative/regulatory framework makes it difficult to implement e-HRM						

I would appreciate it if you could suggest or recommend any useful ideas or comments for the implementation of e-HRM using your own words

Thank you for your cooperation