

UNIVERSITI TEKNOLOGI MARA

**THE DEVELOPMENT OF A
PRESERVATION FRAMEWORK
FOR PRIMARY RESEARCH DATA
AND RECORDS FOR RESEARCH IN
DIGITAL FORMATS**

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Thesis submitted in fulfilment
of the requirements for the degree of
Doctor of Philosophy

Faculty of Information Management

May 2017

ABSTRACT

This study is an attempt to gain greater understanding of the preservation of primary data and records of social science research in digital formats. The work draws from the perceptions and ideas of those involved in the management and preservation of these records namely the researchers, research administrators, records managers and IT officers at the public research institutions and related organizations. Essentially mix-method in nature, this study sampled 411 respondents from eleven research institutions and related organizations for quantitative data and twelve informants for qualitative data from individual interviews and focus group discussions to permit purposive sampling. Qualitative data was also elicited from documents analysis. Phase one of the study involved the examination and analysis of international best practice models and developed a generic model based on the InterPARES Chain of Preservation (CoP) and the United Kingdom Data Archives (UKDA) models. Phase two of the study involved investigation of the existing practices on the preservation of these data and records in the selected Malaysian public research institutions and related organizations. Phase three involved critical analysis of data gathered in phase two against the generic model developed in phase one of the study in order to develop a framework for the Malaysian case. The framework was validated through a focus group discussion. The views and opinions of the focus group discussion offers valuable insight into the formation of the conclusive framework which consisted of (a) generic model elements of the CoP and UKDA; and (b) those common elements of the Malaysian case that match the elements of the CoP and UKDA; and (c) those common elements of the Malaysian case that did not match the generic model elements of the CoP and UKDA but perceived by the focus group as essential elements if the framework is to be successfully adopted and implemented. Theoretical contribution of the study include the development of a conceptually construct framework of electronic recordkeeping systems and data archiving systems. Methodologically, the study shows the effective use of the mix-method approach within the interpretivist naturalist research paradigm. However, this framework must be understood within the specific context of the environment in which the field work was carried out. In order to evaluate of its universal application, similar projects employing the same methods but conducted in contrasting environments or in other countries have been found to have great value.

ACKNOWLEDGEMENT

Alhamdulillah, all praises to the Almighty Allah for answering my prayers. I have finally completed a very challenging task.

I hereby offer my thanks to Universiti Teknologi MARA (UiTM) for providing me with the opportunity which enabled me to pursue a PhD. I wish to acknowledge the contribution of my main supervisor Dr Asmadi bin Mohd Ghazali and my second supervisor Dr Irwan Kamaruddin bin Abd Kadir (from April 2014) who constantly pushing me to the limit until the completion of this work. I am particularly appreciative of the support given to me by all research participants; researchers, research administrators, IT officers and records managers from the research institutions and related organizations involved in this study whom have been extremely helpful and supportive towards my work.

My biggest debt of gratitude, however, is owed to Associate Professor Dr Rusnah binti Johare whose contribution to this journey is immense (as main supervisor until March 2014). Her deep thinking and her openness to multiple perspectives, and the calmness and kindness that she always portrayed has made me feel comfortable and secured to complete this colourful journey. Without her continuous encouragement and persuasion, this PhD study would never have taken place.

On a less formal note, I am indebted much to my parent; Mohd Yunus bin Abd Rahim and for their never ending support. Their prayers, support and serenity makes them my true inspiration. I wish to acknowledge the role of my lovely partner and wife Dr Sakinah Salleh who always undoubtedly believe in me, supporting me, motivating me and pushing me to the limit from the very beginning until presently and my lovely children, Anis Najwa, Ain Syafia Qutreenie and Ieman Ihsan, who always inspire me, understand me, cheer me up and remind me of the good things that happened in this journey. They are truly my inspiration and hope. It is indeed an unforgettable journey that will always be remembered as much as it will be cherished in my life. The challenges, joys, of all the years spent in gaining knowledge and experience through ups and downs will shed light to my professional career development and my future undertakings.

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CHAPTER ONE

INTRODUCTION

1.1 OVERVIEW

Primary research data and records are the products of a research process and they form an increasingly large part of our cultural and intellectual heritage and offers significant benefits to users. They can be organized into four categories namely records documenting the management of the research process; records documenting research outcomes or products; records documenting the management of the research process/projects; and research data in both ‘raw’ and ‘analysed’ form (McLeod & Child, 2003; Guercio, 2009; Wang, 2009; Gustavsen, 2009). The creation and maintenance of these records is integral to the research process. Complete, authentic and reliable records are required to demonstrate good research practice and to strengthen the reliability of research evidence; safeguard researchers and institutions from allegations of research misconduct; demonstrate effective stewardship of resources to auditors and research sponsors; protect individual and intellectual property rights; and demonstrate compliance with legislation, regulations and other requirements (Sam, 2009; Duranti, 2013). Whatever the context, preservation is a response to the threat of destruction and loss.

The primary research data and records need to be managed and preserved to prevent destruction and loss to benefit further research, innovations and inventions. Increasingly, these records and the systems that generate, manipulate, manage and preserve them, are electronic in nature. One of the most significant problems facing research institutions and related organizations that create and manage their records is that electronic systems they used are seldom designed to keep records (McLeod, Hare & Rusnah, 2004). Thus the main problem is that of system obsolescence. Systems change rapidly and there is no guarantee that today’s software will be readable by tomorrow’s hardware. In this case the preservation of primary research data and records in digital formats as part of our intellectual and cultural heritage is critical as there is already evidence that these data and records created or acquired with public money is being lost through neglect or through a lack of awareness of the need to take