

# ict and Islam

Mohamad Fauzan Noordin



IIUM Press



# ICT AND ISLAM

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PUSTAKA PERDANA



1011417

IIUM Press



Published by:  
IIUM Press  
International Islamic University Malaysia

First Edition, 2009  
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Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Mohamad Fauzan Noordin  
ICT and Islam  
Bibliography p. 171  
Includes index  
ISBN 978-967-5272-21-9

ISBN: 978-967-5272-21-9

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM  
(Malaysian Scholarly Publishing Council)

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# PREFACE

IICT and Islam is the book to answer the call for the Islamisation of Knowledge. The Islamisation of knowledge is an effort to understand knowledge from the Islamic perspective. This book is the first attempt to explore the relationship between ICT and Islam.

The effort to write this book started way back in 1991 albeit on a small scale. Nevertheless, the author persevered to develop and progress work. His labours came to fruition when he started preparing the contents for the course “ICT and Islam” for final year BIT students in 1998. Thus, most of the present work resulted from the lecture notes prepared for the ICT and Islam course or INFO 4501.

The objective of this book is to give readers the understanding between ICT and Islam. It also provides analyses and discussions of ICT from an Islamic perspective. ICT is not new in Islam. In fact, *Qalam* is mentioned in the first *sūrah* revealed to Prophet Muḥammad (Peace be upon Him). According to Ibn Kathīr, in one ḥadīth ṣaḥīḥ Rasūl Allāh (Peace be upon Him) said: The *Qalam* is the first creation that was created. The function of the *Qalam* is to write, store, and disseminate information and knowledge. Nowadays, computers are used to write, store and disseminate information and knowledge. Thus, metaphorically, the Computer is the *Qalam* for this generation.

ICT and Islam also discusses the relationships among data, information, knowledge and wisdom (DIKW). Among these, wisdom is given greater emphasis since it completes the understanding of the DIKW model.

Interestingly, this book introduces the concept of heartware. Heartware is another element in peopleware. In conventional IT books, most authors discuss hardware and software, yet rarely do they touch on peopleware and hardly ever

on heartware. Among the IT components, peopleware is the most important element as compared with hardware and software. It is from peopleware that we develop the hardware and software. Peopleware is the ultimate usage and application of hardware and software. Within peopleware, the most important component is heartware. Hence, heartware is the one that determines the direction of peopleware.

The author hopes that readers will have a better understanding of ICT from the Islamic perspective. Muslims should have a sense of belonging toward ICT since the first verse revealed is indeed about IT or computers. Undoubtedly, the first creation by Allāh SWT is *Qalam* that can be interpreted as the Computer of Allāh.

*Yā Allāh*, without Your *Hidāyah* and *Ḥikmah*, I would have never completed this book and other *amal soleh*. Your *Hidāyah* and *Ḥikmah* will always be my goal and destination. The author would like to acknowledge the love and care given by *Allahyarham* Hj. Noordin Salleh and to my mother Hajah Habsah Hj Mod Rejab who has taught me the Qur'ān and good behaviour. Your deeds will always be remembered in my *du'a'*.

To my wife, Assoc. Prof. Dr. Hj. Roslina Hj. Othman who has always been my strength and guidance. Your love, patience and encouragement will ever live in our lives here and the hereafter.

To my sons and daughter, Abdullah Anwar, Abdul Rahman Ali, and Adlin Farihah, my love and *du'a'* will be always be to all of you. Your understanding and patience are very much appreciated.

To my Research Assistants, may Allah reward all of you. Finally to IIUM, KICT and RMC management, thank you for your support and help.

# INTRODUCTION

Chapter 1 introduces the concept of *Qalam* mentioned in the first *surah* revealed by Allāh SWT, as in line with the concept of Computer. Islam encourages the use of computer technology for Muslims and others for achieving the objectives of life – ‘*Abd Allāh* and *Khalīfah*. It is beautiful to see how Islamic philosophy actually fits into the modern society since it emphasises the value of knowledge and wisdom. The Islamic philosophy upholds the true foundations i.e. the *Qur’an* and *Al-Sunnah* and influences the ICT philosophy by guiding the system developers in producing an information system. ICT components from the Islamic point of view (peopleware, hardware, software) also relate to the wisdom of people using the technology as the vehicle in the Journey of an *Insān*.

Chapter 2 discusses how the guiding principles i.e. the *Qur’an* and *Ḥadīth* assist humans in managing and practicing good moral conduct in using technology to fulfil the roles as *Khalīfah* and ‘*Abd Allāh*. The responsibilities Allāh SWT has entrusted us with the guidance of *Qur’an* and *Sunnah*, bring Muslim a step forward as a civilized society equipped with ethics, security and privacy in ICT principles. Islam has established guidelines for good moral conduct and for exercising wise judgment (*Imān* and *Taqwāh*) among the followers in every aspect of their life including their use of computer technology. Islam has never put aside the importance of ethics, security and privacy among users as these values will enhance human morality and differentiate one person from another.

Chapter 3 describes the important role of peopleware as knowledge workers in becoming wisdom workers. There are different life stages in Islam for making human life complete, which is known as the Journey of an *Insān*. Similarly, ICT

principles stress the development of data, information, knowledge and wisdom and how these components affect human life and computer technology. The two most important components in these changes are knowledge and wisdom which measure the transformation of economy, organisational structure, organisational behaviour and also principles of development. Knowledge differentiates the skills acquired by an individual especially in the ICT skills. It is the one that both the *Khalifah* and *Abd Allāh* use to motivate people into becoming wisdom workers.

Chapter 4 explains the important element in ICT which is the Infostructure (information combined with infrastructure). The Infostructure components like hardware, software and peopeware will generate comprehensive ICT tools for the benefit of human kind and in making the world prosperous. The distinguished aspects in Infostructure generally consist of hardware and software development technologies. The Islamic point of view that is the *Tawhīdic* vision, brings IT users to understand the real objectives in using computer technology. Also mentioned in this chapter, are several Islamic concepts applied in an Infostructure such as the Satellite, Repeater, GIGO and DNA Computing.

Chapter 5 informs on the evolution of Information Society to Knowledge Society to Wisdom Society. ICT brings changes and dominates this Journey of Society and defines the different characteristics in each society. There are also issues that arise in the growth of Knowledge Society like Digital Divide and Knowledge Divide. Yet ICT strategic development tool can be united with Islamic principles to form the Wisdom Society i.e. Madani Society.

Chapter 6 states the three important notions in E-Government which are Transparency, Accountability and Trust. These notions are significantly mentioned in the *Qur'ān*. These notions must be observed especially by government agencies that deliver services citizens so as to gain the peoples' trust. Most of the world E-Government sites try to fulfil all the three notions as they believe that by preparing knowledge and services that

are transparent, accountable and trustworthy they will gain the confidence of the citizens and society.

Chapter 7 emphasises on ICT and Islam as the central discipline in the Islamisation of Knowledge, where the understanding of both the Islamic Divine Revelation and computer technology will increase society's level of awareness and life. Islam is a religion that not only is consistent with man's belief but it comprehensively covers every aspect of human life, society, environment, technology, education and many others. Indeed, the value of ICT components and the symbol of ICT as the vehicle in the Journey of an *Insān* will generate exclusive IT users in due course. Islam has never neglected the emergence of technology. Infact, Islamic concepts parallel with the concepts of ICT. Both will bring quality life to mankind in this world and the Hereafter.



# CHAPTER 1

## THE PHILOSOPHY OF ICT AND ISLAM

### 1.0 INTRODUCTION

Allāh s.w.t. (May He be praised and may His transcendence be affirmed) entrusted upon us human beings the role of *Khalīfah* (vicegerent), not without any assistance. He has equipped us with the tools, the technologies and the infrastructure to live our lives to the best of our abilities. These amenities are inferred from the word *Qalam*, mentioned in the first *sūrah*, al-‘Alaq, revealed to the Prophet Muhammad s.a.w. (Peace Be Upon Him) and man in essence, the functions of *Qalam* is interpreted as similar to what a computer could also do. *Qalam* could be translated as a tool that is able to write, store, share and disseminate data, information, knowledge and wisdom. The first word in the *sūrah*, i.e. *iqra’* which means read, could be well presumed as the first task assigned to our Prophet Muhammad s.a.w and the *ummah* to acquire knowledge and to begin their lives.

Acquisition of knowledge is a very important activity in human’s life. Allāh s.w.t. recognizes this in the *Qur’ān* with its *iqra’* imperative repeated twice as well as enjoining Muslims to acquire knowledge in a total of 750 verses in the *Qur’ān*. Indeed, this knowledge acquisition activity embodies the two major responsibilities shouldered by humans in this word: as ‘*Abd Allāh* (servant of Allāh) and *Khalīfah* (vicegerent of Allāh). Interestingly, Allāh s.w.t chooses knowledge over any other to make known HIS will to Prophet Muhammad’s followers. This differs from how Allāh revealed HIS will to followers of Prophet Mūsā a.s. (Upon Him be the blessings [of Allāh]) and Prophet Dāwūd a.s.

Allāh s.w.t honours humans with knowledge. This is evident in Allāh revealing complete and comprehensive knowledge to our Prophet Muhammad s.a.w. in the form of the *Qur’ān*. The *Qur’ān* is the word of Allāh s.w.t, teaching humans various aspects of life, ranging from philosophy to sciences, history to biology, astronomy to

# ict and Islam

ICT and Islam covers the philosophy of ICT and Islam, the Qur'an and the Hadith as the guiding principles for ICT ethics, security and privacy, the Qalaam as the infostructure, peopeware, heartware, knowledge workers to wisdom workers, knowledge society and wisdom society in ICT, the e-government: the trust, transparency and accountability, and the ICT and Islam as the way forward. Ultimately, ICT and Islam not only explains the relationship between ICT and Islam, but also provides the solution to the ummah and the world.



**Mohamad Fauzan Noordin** received his Ph.D. from the University of Wales, U.K.; MBA from the Central Missouri State University, U.S.A.; and B.Sc. (Computer Science) from the University of Missouri Kansas City, USA. Within just over a decade, his career has spanned far and wide. Currently, he holds the Directorship of the Centre for Collaborative Technology, IIUM. In 2004, he was the Assoc. Professor in the same field at University of Bahrain for a year. Besides these, he is an appointed and has been a member of the research panel for the Development Applications Research Grant at the Ministry of Science Technology and Innovation since 2005. Another testimony of his capability is his appointment as the first

Dean of ICT at the Al-Madinah International University at Shah Alam, Selangor, Malaysia (2007-2008).

Presently, he is also the Chairman for the Research Group on Islamic Knowledge Technology, and the former Vice-Chairman for the Society for Information Retrieval and Knowledge Management Malaysia (SIRKOM). Previously, he was the Director for Information Technology Division (2001-2004), Director for Centre for IT Advancement (2004), and Director for C-ExCEL (1999).

He specialises in Management Information System (MIS), ICT and Islam, Grid and Cloud Computing, E-Banking, Knowledge Management and Project Management. A professional member for the Association for Computing Machinery (ACM), he has also been the IT Advisor for the State of Pahang Darul Makmur, the ICT Steering Committee for the State of Selangor Darul Ehsan and the IT Advisor for the State of Perak Darul Ridzuan. In 2009, he was appointed the member for the National Grid Technical Committee by the Ministry of Science, Technology and Innovation.

In terms of publishing, he has contributed articles in various local and international journals. His research on Multilingual Search Engine and Retrieval System won the Best Research for University level 2009 and 2 Silver awards at the International Invention and Technology Exhibition 2009. He has often been invited by national TV and Radio stations and interviewed by national newspapers as an expert on ICT issues. He has also been invited as a Guest Speaker presenting talks on Grid Computing, Cloud Computing and Information Technology at International conferences in Germany, Canada and Taiwan.

IIUM Press

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E-mail: [rescentre@iium.edu.my](mailto:rescentre@iium.edu.my)

Website: <http://research.iium.edu.my>

ISBN 978-967-5272-21-9



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