



IT in the 21st Century: Benefits, Barriers & Concerns of Muslim Scholars

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Abstrak: Revolusi Teknologi Informasi (TI) telah melanda dunia. Banyak ulama, ilmuwan, dan intelektual Muslim yang telah bergabung memuji manfaat dan kebajikan TI ini. Buktinya adalah maraknya situs Islam di Internet, beberapa didedikasikan untuk pendidikan dan penyebaran Islam, dan lainnya lebih bersifat komersial. Bukti lainnya adalah banyaknya workshop, seminar, dan konferensi yang membahas isu ini, dan juga didirikannya pusat-pusat TI di seluruh penjuru dunia Muslim. Namun, ada juga kalangan Muslim yang enggan menerima revolusi TI ini. Mereka memperingatkan kemungkinan dampak buruk TI terhadap generasi muda Muslim dan masyarakat Muslim secara umum. Ada juga kelompok Muslim lain yang mengakui bahwa terlepas dari sejumlah efek-samping negatif, ada sejumlah manfaat yang sangat positif yang bisa diperoleh melalui penggunaan TI dalam Dunia Muslim. Ada sejumlah konferensi dan seminar yang mulai menyuarakan 'Pengislaman' TI, dan juga bagaimana kaum muslim bisa menggunakan TI untuk tujuan dan kepentingan mereka. Artikel ini berusaha menyoroti sejumlah pendapat dan persoalan di atas, dalam rangka menentukan sejauhmana teknologi tersebut bisa dianggap Islami atau tidak Islami, sebagaimana diajarkan oleh al-Qur'an dan sunnah Nabi Muhammad. Akan juga dibahas sejumlah manfaat, hambatan, dan perhatian masyarakat Muslim umumnya dan ilmuwan Muslim khususnya dalam menerima dan memanfaatkan TI. Kata Kunci: *Teknologi Informasi, ilmuwan muslim, Islamisasi.*

Introduction

The information technology (IT) revolution has taken the world by storm. Many Muslim scholars, scientists and intellectuals have joined the bandwagon in extolling its merits and virtues. Evidence of the eagerness on the part of some Muslims to embrace such technology, has been the proliferation of Islamic sites on the Internet, some devoted to Islamic education and propagation, others being of a more commercial nature. Further evidence of Muslim interest in IT is the growing number of workshops, seminars, and conferences devoted to the issue, as well as the establishment of IT centres throughout the Muslim world. For example, in the past few years, the Organization of Islamic Conference Standing Committee on Scientific and Technological Cooperation (COMSTECH), has established four Centres for IT and Computer Science in Cameroon, Senegal, Pakistan and Syria (soon to be opened). Even governments are bracing themselves for the wave of the future. In this regard, Malaysia has embarked up on an ambitious project to build a Multimedia Super Corridor (MSC) in order to accelerate its 'entry into the information age'.¹

In contrast to the above, Muslim scholars, scientists, intellectuals, political leaders, etc., other Muslim scholars have been more hesitant in accepting the IT revolution. Members of this group warn about its possible ill effects on Muslim youth and society in general. Particularly in the Islamic fields, one finds many scholars reluctant to use such technology, even for research and academic purposes, despite having access to such facilities. What are some of the barriers that such scholars face in accepting and



utilizing such technology? What are some of their concerns and to what extent are such concerns legitimate from an Islamic point of view?

Still another group of Muslims recognises that in spite of some negative side-effects, there are some very positive benefits to be gained via the use of IT, in the Muslim world. In this respect, a number of conferences and seminars have begun to address the 'Islamicity' of IT, as well as how Muslims can use IT to further their own goals and purposes.²

This article seeks to address some of the above positions and issues in the Islamic world, in an effort to determine the extent to which such technology can be considered Islamic or un-Islamic, as defined by the Holy Qur'an and sunnah (traditions) of the Prophet Muhammad. It will also discuss some of the benefits, barriers and concerns of Muslim societies in general and Muslim scholars in particular, in accepting and utilising IT. Finally, a number of recommendations will be made on how some of these barriers and concerns can be overcome.

Perspective of the Quran and Sunnah on IT

Prior to delving into the Islamic perspective on the issue, it is best to commence with a proper definition of what is meant by Information Technology (IT) (in Arabic *ilm al-ma'lumat al-tiqaniyyah*). IT is essentially a composite word derived from the words 'information' and 'technology'. Webster's Universal College Dictionary defines information as 'knowledge communicated or received concerning a particular fact or circumstance' or 'knowledge gained through study, communication, research, instruction etc.'³ Technology on the other hand is defined as 'the science of the application of knowledge to practical purposes'. Juxtaposed together, the two terms have come to refer to 'the use of computers and telecommunications for the processing and distribution of information in digital, audio, video, and other forms'.⁴

The first thought which probably crosses the minds of those unfamiliar with Islam, is what possible relationship could there be between IT, as defined above, and a book revealed 1400 years ago (i.e., the Holy Quran)? Perhaps it is best to state the obvious. The Quran is neither a scientific text-book, nor a technological 'how-to' manual. Instead it is a book of guidance, which contains general principles applicable to all times and places. Quranic principles and guidance pertain to all spheres of life, the scientific sphere being no exception and by analogy the domain of IT.

As seen above, there is a direct link between IT and the acquisition of knowledge. It is here that the relationship between the Quran and IT lies in Islam. The importance of seeking and acquiring both revealed and human investigated knowledge was stressed from the very first revelation,

*"Read in the name of your Lord, who created, created man from a clot"*⁵

The tremendous value Islam attaches to the acquisition of knowledge is emphasised in numerous other verses as well. For example, the Quran makes a clear distinction between those who possess knowledge and those who do not.⁶ In addition, humans are encouraged to ask Allah to help them



increase their knowledge.⁷ In fact, many Muslim scholars consider the search for knowledge as an act of *ibadah* (worship), as long as the seeker is sincere in his/her pursuit and pursues such knowledge with the intention of pleasing Allah.

Generally speaking, the Islamic tradition has classified knowledge into two categories. The first kind of knowledge is that given by God to man via revelation. This type of knowledge is regarded as the highest form of knowledge and consequently is made obligatory on every Muslim to learn, understand and implement. The second form of knowledge is that acquired by humans through rational inquiry based on experiments and observation.⁸ It is in this latter category that the field of IT lies.

In the early Islamic period, Muslims attached great importance to collecting, storing and preserving both the Quran and Prophetic traditions for future generations. By analogy, it holds that Muslims should employ whatever means are available today to access information, store, process and distribute their heritage, ideas etc. In this respect, IT is simply a means to an end. While there is nothing in the Quran and sunnah which clearly prohibits Muslims from developing and utilising IT for their own needs, like all technology, IT can be employed for both positive and negative ends. It is up to humans to decide which end they will use it for.

Allah (swt) has given humans revealed guidance endowed them with reason and subsequently held them accountable for all their actions. Ultimately, they will be judged by their intentions, since the Prophet Muhammad has stated, 'the reward of deeds depends upon the intentions and every person will get the reward according to what he (or she) has intended'.⁹

The extent to which IT falls within the legal parameters or spirit of the *shariah* (Islamic law) and takes into consideration public interest, ecological balance, social justice etc., can be considered halal (permissible) and desirable. Conversely, the extent to which IT goes beyond the boundaries or spirit of the *shariah* and promotes alienation, excessive consumerism, environmental destruction, concentration of wealth in fewer and fewer hands and/or brings Muslims away from Islam, it is considered haram (not permissible).

Benefits of IT

Undoubtedly, the greatest benefit to be gained by Muslim societies and Muslim scholars from the use of IT, particularly the Internet, is information in general and Islamic knowledge in particular. The Internet contains a wealth of information on all kinds that users can access quickly and easily. Much of this information can be highly beneficial to Muslim societies and scholars. For example, reference material such as dictionaries, encyclopedias, thesaurus, books, journals etc. are easily available on-line, thereby greatly facilitating a researcher's task. In addition, a variety of distance learning programs offered by various institutions of higher learning can also be accessed on-line.

As far as Islamic knowledge and information is concerned, there are a plethora of sites catering to all kinds of needs. For example, IslamiCity (www.islam.org) 'leverages electronic, information and



communications technologies to provide the most comprehensive resources and information from an Islamic and Muslim perspective to a worldwide audience'. Alim (www.alim.org) includes 'material that every Muslim needs to learn about Islam, the Quran and Hadith'.¹⁰ Al-Islam (www.al-islam.org) is a Shia Muslim (an Islamic sect) site devoted to disseminating both religious teachings.

IT has enabled Muslims all over the world to access Quranic recitations, translations, and tafsir (exegesis), books of Hadith, fiqh (jurisprudence), juridical opinions etc. in various languages online and on CDs in both audio and video format.¹¹ For example, Harf Information Technology (www.harf.com) has developed Islamic materials on electronic media such as the Holy Quran with its most famous interpretations and more than 62,000 Prophetic hadiths with related commentaries and studies. It has also made accessible many classical books of Islamic jurisprudence on its Encyclopedia of Islamic Jurisprudence, which contains 750,000 printed pages.

Due to Islamic sites such as those mentioned above and CDs containing pre-existing juridical opinions and proofs of all the legal schools of Islamic jurisprudence on a variety of topics, IT has the potential of considerably facilitating the job of *shariah* (Islamic law) specialists, by enabling them to generate legal decisions much quicker than in the past.

The ulama (traditional religious scholars) are not the only ones to benefit from easy accessibility to classical Islamic sources of knowledge. Students of Islamic studies are also able to conduct research on a wide variety of Islamic topics, unrestricted by past limitations such as inadequate library resources or prohibitive costs. In this respect, Abdul Kadir Barkatullah, Director of London's Islamic Computing Centre argues that the availability of classical Islamic texts and commentaries both on CDs and on-line has had a tremendous impact on Muslims whose access to religious scholars is limited (i.e. those living in minority situations), since it enables such Muslims to verify the things they hear (i.e. concerning Islam) for themselves.¹²

The internet also serves as a notice board for the ummah (global Muslim community), providing information about Islamic organisations, places of worship, academic institutions specialising in Islam, student organisations, conferences, seminars, up-coming community events, entertainment, etc. In addition, there are programs that inform Muslims of the time of prayer and direction of the kibla for almost every major city in the world, Islamic arts, calligraphy, architecture and designs, and traditional Islamic music.

A second related benefit of IT, is that it is a powerful tool for dawah (Islamic propagation) or conveying the message of Islam to others. In the Holy Quran, Allah states, 'invite (all) to the way of thy Lord with wisdom and beautiful preaching'.¹³ Accordingly, Muslims are enjoined to use wise methods and appealing means to convey the message of Islam. In the 21st century, the Internet has emerged as the most cost-effective means of presenting knowledge, information and news to millions of people in accordance with the above Quranic injunction.¹⁴



Thirdly, the internet is a valuable instrument for networking and exchanging ideas with both Muslims and non-Muslims. Traditionally, the Muslim world has been comprised of a variety of groups and communities and shaped by ethno-cultural, geographic and linguistic forces. Sometimes these relatively homogenous groups have evolved unique ways of thinking about Islam, often at variance with one another.¹⁵ IT is playing an invaluable role in breaking down ethnic, racial and geographical borders, by enabling Muslims from across the ummah to exchange ideas, network, and discuss their various views and positions on different aspects of Islam. In this respect, IT is serving to fulfill the commandment of Allah to ‘know one another’.¹⁶

IT can, not only, foster a truly international Islamic brother/sisterhood, but chat rooms, discussion forms, question and answer sessions etc. may serve as powerful mechanisms for generating new understandings or formulations of old problems and/or new solutions to new problems facing the Muslim ummah. The Internet is becoming a powerful organising tool for various Muslim political interest groups. For example, CAIR (www.cair-net.org) does legal advocacy work on behalf of the Muslim Community in North America.

Although some discussion and chat sessions have been hijacked by ideological fanatics, such forums can nurture greater tolerance among Muslims. Furthermore, such interactions can elicit participation from shy or withdrawn scholars who would not speak up in a face-to-face forum. The participation of non-Muslims in such forums demonstrates the role of IT as a tool for inter-faith dialogues and debate.

Ulama and religious scholars can also benefit from such technology. Traditionally, when Islamic scholars wanted to come to a consensus on a particular legal issue, the slow nature of communication and transportation made it a time-consuming process. Today, however, with the advent of e-mail, voice-mail, fax, video-conferencing, Internet, chat rooms, net-phone programs, virtual reality systems, etc., Islamic scholars located in different parts of the ummah can come together relatively easily and inexpensively to discuss and debate problems and challenges affecting the Muslim community.

The speed and convenience with which Islamic scholars can communicate and convey information, allows scholars to have greater feedback on proposals, drafts of work in progress etc. It also facilitates the ease with which they can communicate and transmit books, articles, reviews etc. for publication, to academic journals and publishers.

A fourth benefit of IT, which has tremendous growth potential for Muslim communities and societies, is e-commerce. According to Abdul Aleem,¹⁷ the President of IslamiCity in Cyberspace, the amount of e-commerce on the internet is predicted to reach 1.3 trillion (US dollars) by 2003. A number of Islamic companies have taken up the e-commerce challenge and entered the fray. Such companies include Iqra Islamic Publications (www.iqra.org) that focuses mainly on publishing and marketing Islamic educational material, in both Arabic and English, for children of various ages. SoundVision (www.soundvision.com) and Astrolab (www.astrolabepictures.com) are also involved in marketing Islamic books, videos, compact discs, audio tapes, etc.



Barriers Faced by Muslim Societies and Islamic Scholars in Accepting IT

Considering the numerous benefits IT offers to Muslims, why is it that so few Muslim countries are developing an indigenous IT capacity? More specifically, why are scholars in varieties of disciplines not making better use of such technology?

One of the biggest barriers facing Muslims societies in utilising IT, is the high rate of illiteracy, which presently exists in many Muslim countries. Although illiteracy in the Muslim world, varies from country to country, on average more than 70% of Muslims today are illiterate.¹⁸ Unless such rates are drastically improved, it will be very difficult to promote the widespread use of electronic communications.

Although Muslim scholars in Islamic disciplines are literate, many lack computer literacy and expertise in IT, which hinders their ability to utilise such technology. Although the development of software has eased access to information, many ulama do not possess the technical know-how to develop and maintain the technology they are using. This can be a major deterrent for such scholars, who may become frustrated with such technology. The lack of computer literacy and technical expertise among scholars in the Islamic disciplines, frequently affects their attitude towards IT, which in turn has a domino effect on the attitude of other Muslims towards technology.

Language can also serve as a barrier for accessing and utilising IT. While some technologies including fax, voice-mail, net-phone, audio and video CDs can be used regardless of language, other technologies such as the Internet require some knowledge of English to be able to truly benefit from the technology or at the minimal access sites in other languages. Unfortunately, at the present 'none of the major Muslim languages plays a major role in this huge knowledge machine'.¹⁹

The problems of literacy, technical expertise, attitude and language are connected to the kind of education many Islamic scholars are receiving. Many scholars in Islamic disciplines are graduates of traditional religious schools that have focused on memorising of the Quran, Hadith, basic Islamic rituals, rather than applications of such knowledge to meet the changing and growing needs of Muslim societies. Traditionally, such schools have placed little emphasis on scientific and technological education. Throughout the 20th century however, these schools have increasingly come under attack for not producing graduates capable of responding to the changing needs of the Muslim ummah. Their excessive focus on memorisation, rather than understanding, applications and problem solving, has also come under fire, particularly now that the Quran, books of hadith, fiqh (jurisprudence), tafsir (exegesis) are easily available in CD format or on-line.

At the tertiary level, students in the Islamic disciplines hardly fare better than their primary and secondary school counter-parts, in terms of their exposure to IT. Many are trained in Quran, sunnah, Islamic history, law, jurisprudence (fiqh) etc. and have had little exposure to modern sciences, philosophy and languages. Due to the scarcity of resources, many Faculties of Islamic Studies lack the physical infrastructure to support computer literacy and IT training. As a result, students of the Islamic



disciplines often play second fiddle to those in the scientific and technical spheres in acquiring such facilities.

The fact that many ulama graduated from institutions of higher learning without the benefit of computers, and have functioned for most of their professional careers without computers, has made many skeptical about the role and value of computers in Islamic education. Some perceive IT to be a product of secularisation, and therefore opposed to religion. In their views, the Quran contains all knowledge, as such 'it is not necessary to seek knowledge from other sources'.²⁰ As we have seen above however, this is an erroneous view, since in addition to revealed guidance, humans are endowed with reason and commanded to use their talents to come up with solutions to the difficulties they encounter. Other ulama continue to debate the utility of IT in the organisation of religious knowledge.²¹

In spite of the above, there have been some efforts to improve the IT literacy of students in the Islamic disciplines. Abdul Kadir Barkatulla states that traditional centers of Islamic learning (such as al-Azhar in Cairo and Qom in Iran) are forced to respond to opportunities offered by IT, due to competition from more modern religious universities. He further states that nowadays there is almost a race to digitise Islam, among leading centers around the world.²² For example, al-Azhar University of Cairo has its own home page devoted to addressing various Islamic issues (www.alazhr.org), in both English and Arabic languages. The Centre for Islamic Jurisprudence in Qom, Iran, has converted several thousand Sunni and Shia texts to electronic form,²³ while the International Islamic University in Malaysia is also making strides to produce graduates in the Islamic disciplines, who possess IT knowledge and skills as well.

Another barrier to accessing and utilising IT is a lack of financial resources. Muslim countries are among some of the poorest in the world. Even in those countries, which have high rates of GDP, there is no equitable distribution of resources. Although some argue that one of the merits of IT (particularly the Internet) is its low economic cost, for many individuals in the developing world (of which Muslim countries are part), such costs are relatively high. The acquisition of hardware, development of software, provision of training, maintenance, upgrading and R & D, requires an extensive outlay financial capital, which many debt-ridden Muslim countries simply cannot afford. As a result, access to such technology is still very much limited to those in upper socio-economic income brackets.

Dr. Atta-ur-Rahman argues that there is a growing boundary in the Islamic world 'between the haves and have-nots, between those who claim to have knowledge and those who possess money'.²⁴ This view is also held by Bruce Lawrence, who states that IT serves to 'reinforce global capitalist structures and asymmetries' and further the 'marginalisation of the already marginal'.²⁵ In light of such predictions, Muslims living in Africa and Asia, will be among the least likely of its beneficiaries.

Concerns of Islamic Scholars about Accepting IT



One major concern some Islamic scholars have regarding the use of IT, is that the relatively easy accessibility to information (i.e., Islamic CDs, web sites, discussion groups, etc.), is leading to the breakdown of traditional hierarchical barriers that have previously existed between them and the general masses. According to Sa'ad al-Faqih of the London based 'Movement for Islamic Reform in Arabia', IT goes a long way to bridging the 'knowledge gap' between an *alim* (religious scholar) and a lay Muslim by placing all relevant texts at the fingertips of the latter.²⁶

Many scholars in the Islamic disciplines defend their position, by arguing that 'not all information in this era of globalisation leads to knowledge and not all knowledge gives birth to wisdom'.²⁷ To some extent their position is justified since most sites on the Internet are commercially oriented, with academic and Islamic sites, comprising a very small minority. Moreover, due to the anonymous nature of such technology, the reliability and authenticity of information must always be subject to scrutiny. With hundreds of sites dealing with Islam, Muslims, etc. it is difficult for cyber visitors to distinguish between genuine Islamic sites and those with more sinister motives.

For example, while Muslims can now receive religious pronouncements via the various e-mail fatwa services which have sprung up in recent months, they can never be sure whether the authoritative advice received via these services is coming from a classically-trained religious scholar or an electrical engineer moonlighting as an amateur alim.²⁸ Khan and Khan²⁹ add that there have been cases of fabricated verses of Quran and Hadith put on the Internet by questionable sources. Moreover, fringe or 'deviationist' Muslim organisations such as the Ahmadiyas and Rashid Khalifa's spend lots of time and money promoting their various search engines and new organisations. Ahmad³⁰ states that although these sites are littered with false deceptions, they are well designed and present their views in a professional manner.

Due to the above, some Islamic scholars fear that IT will lead some Muslims away from the straight path (i.e., of Islam), by exposing them to all kinds of deviationist or misinformation about Islam, as well as immoralities and obscenities, in general. Moreover, it may prevent some computer addicted Muslim personalities from fulfilling their religious obligations (i.e. praying on time etc.). Advocates of this view argue that IT falls into a gray area, which is better to be avoided. They support their argument with the following prophetic hadith:

*'Both legal and illegal things are evident but in between them there are doubtful (suspicious) things and most of the people have no knowledge about them. So whoever saves himself from these suspicious things saves his religion and his honor.'*³¹

Another concern many Muslims have about using IT, is the fact that they are passive consumers of a technology created elsewhere, which is hardly value-free. IT's close connection and integration with western/Japanese culture, can be threatening for some Muslim societies, who fear another onslaught of Westernisation, under the pretext of globalisation. In this respect, Muzaffar argues that 'the religious vision of humankind has very little in common with the motives and goals of globalisation'.³²



Recommendations and Conclusions

Although the list of barriers and concerns faced by Muslim societies in general and scholars in the Islamic disciplines in particular can go on and on, to do so would merely serve defeatism. Since IT has numerous benefits and opportunities for Islamic scholars and there is nothing in the Qur'an and sunnah which blatantly prevents Muslims from utilising and developing such technology (other than general guidelines), this latter part of the article will examine some of the ways the aforementioned barriers and concerns can be alleviated, in order to assist Islamic scholars in enhancing their IT proficiency, in the 21st century.

First and foremost, it becomes clear that many of the barriers and concerns faced by Islamic scholars, stem from the inadequacy of the educational process. One almost hesitates to recommend educational reform as the key to alleviating such barriers and concerns however, since for the last two centuries Muslim scholars and intellectuals have been talking about such reform. Clearly, the extent of repetition directly correlates with the magnitude of the problem.

Throughout the 20th century, many scholars have argued that traditional religious schools should offer a more integrated education, including modern scientific subjects such as IT in their curriculum. In this respect, Zahid³³ states that Muslims 'must create institutions where the education of the Quran, Hadith, and Shariah, goes side by side with the education of mathematics, physics, chemistry, biology, computer science, engineering, economics, and other sciences'. In addition, there is a need to enhance the language abilities of students enrolled in traditional religious schools, to better equip them to access information from both Islamic and non-Islamic traditions.

At the tertiary level, there is a greater need to apply and incorporate IT into the education curriculum. Essentially, the successful integration of IT into the Islamic disciplines is dependent upon two primary factors. The first factor required is the development of the physical infrastructure to enable both academic staff and students in the Islamic fields to access and utilise such technology. While governments can play a role in financing and supporting such ventures, limited resources often means that greater efforts must be made to get the private sector to play a larger role. Awkaf (Islamic endowment funds) can also be used towards this end.

A second necessary factor for the successful integration of IT into the Islamic disciplines is the creation of greater interest and awareness among scholars in Islamic studies about the benefits and possibilities of IT and its applications, in the field of Islamic studies. In this respect, departments should hold workshops and seminars on IT, given by experts in the field, who are able to talk in non-technical language.

In addition to generating awareness, introductory and upgrading courses in computer literacy and IT is essential for both staff and students in the Islamic fields. There is no point talking about integrating IT into the curriculum and hailing the benefits of IT, without showing religious scholars how to use and benefit from such technology. Particularly in the early stages, it is important that IT technicians are easily



accessible to trouble-shoot, so that Islamic scholars will be able to develop confidence. With greater hands on-experience, Islamic scholars will feel more at ease about IT and consequently will be more inclined to integrate it into their teaching methodologies.

IT presents a fantastic opportunity for Islamic scholars to develop a variety of programs to assist students in learning about their Islamic heritage. In this regard, scholars should be encouraged to join courses with technicians in the Departments of Information Technology to develop and design software that not only meets their own research needs, but the educational needs of their students as well. Islamic scholars that are more ambitious should be given training on how to create and develop their own Web page. In so doing, they would no longer be 'passive consumers' of 'foreign technology', but pro-actively shaping and adapting technology to suit the needs of their discipline and the ummah in general. Some scholars such as Sheikh Yusuf Qaradawi have already established sites (www.qaradawi.net), which cover multi-dimensional issues on Islam.

The facility and ease with which Islamic scholars can communicate using IT, will enable them to exchange ideas and information with other scholars on how to build attractive Web sites, create chat and discussion groups, question and answer sessions, etc. In fact, as more and more reputable Islamic scholars take advantage of the opportunities IT presents, greater pressure will be put on inauthentic Islamic sites devoted to disseminating misinformation or deviationist teachings on Islam, since Islamic scholars will be able to use IT to counter and refute deviationist teachings.

By adopting a positive mental attitude toward the possibilities of IT and using it to serve their interests, ulama would not have to be worried about losing their traditional authority to 'pop shops' disseminating advice in the name of Islam. Instead, they can use IT to enhance their own respect and legitimacy in the ummah, by widening the base of their appeal to the more technological literate youth.

As far as unreliable and inauthentic Islamic sites are concerned, Khan and Khan³⁴ argue that there is a greater need to monitor information on Islam so that fabricated and misleading information can be easily identified. They also recommend developing a mechanism of certification and authentication for Islamic sites disseminating info on Islam, particularly those that use Quran and dubious Hadith to support their views. Ahmad³⁵ suggests that such sites could obtain approval from well-known Islamic organisations, in a similar manner that halal certification is required for food products.

This article has examined IT from an Islamic perspective. It has shown that there is nothing intrinsically in the Qur'an and hadith that prohibit the development, use and adaptation of IT. On the contrary, it was argued that Islam places tremendous emphasis on the acquisition of knowledge towards noble ends. In this respect, IT is simply a means of acquiring information and ultimately knowledge. Like all technology, it can be used for both positive and negative purposes. It is up to Muslims to use revelational guidance and their own rational and sensual faculties to discern the difference between the two.



The second part of the article explored some benefits of IT for Islamic scholars, including the ability to access knowledge in general and Islamic knowledge in particular, Islamic propagation, networking, and e-commerce. Some of the reasons why more Islamic scholars were not making use of such technology, were subsequently discussed. Such reasons include illiteracy, lack of technical expertise, attitude, language, inappropriateness of the educational system and scarcity or mal-distribution of financial resources. The fourth part of the article examined some of the concerns Islamic scholars have about IT. Some Islamic scholars fear that IT will serve to diminish their traditional authority over the Muslim masses. Others fear it will be used to disseminate misinformation or false information on Islam. Still others argue that IT may lead some Muslims away from the path of Islam, by exposing them to various immoralities and obscenities.

In spite of the above barriers and concerns one thing is certain, the genie is already out of the bottle. As such, ulama and Islamic scholars have two choices. Either they can completely ignore IT and subsequently suffer a further loss of credibility in the eyes of the ummah or they can rise to the challenge and pro-actively use IT to obtain the pleasure of Allah, by furthering the cause of Islam and assisting the ummah. Although rising to the challenge is the more difficult of the two, it is also more rewarding in the long run.

Naturally the arduous nature of the task is not one that Islamic scholars can completely address themselves. The onus is on educational institutions to develop the appropriate physical infrastructure to support the use of the latest IT, create awareness of the benefits of IT, as well as its applications in the field of Islamic studies, in addition to offering IT training and skills up-grading courses, designed specifically for scholars in the Islamic disciplines. With the right attitude and skills, Islamic scholars will rise and meet the IT challenge, and will resume their lost position as leaders of the ummah.

Endnote

¹ see www.mdc.com.my.

² www.islamicinternet.org.

³ Webster's Universal College Dictionary (1997), p. 419.

⁴ C. Morris, *Academic Press Dictionary of Science and Technology* (London: Academic Press, 1992), p. 1107.

⁵ Quran: 96: 1-2.

⁶ Quran: 39: 9.

⁷ Quran 20: 114.

⁸ Syed Muhammad Naquib Al-Attas, *Islam and Secularism* (Kuala Lumpur: ABIM, 1978), p. 74.

⁹ Bukhari.

¹⁰ www.kol.org, p. 3.

¹¹ Norman Mariun & Mohd. Salleh & Ahmad Zaki, *The cyberspace: an Islamic Perspective*, Proceedings of the International Conference on Values and Attitudes in Science and Technology Vol. 2, pp. 861-873 (Kuala Lumpur: Islamic Development Bank and International Islamic University Malaysia, 1996), p. 866.



- ¹² P. Mandaville, *Digital Islam: Changing the Boundaries of Religious Knowledge* (Holland: ISIM (International Institute for the Study of Islam in the Modern World) Newsletter, 1 and 23. March 1999, <http://isim.leidenuniv.nl>.
- ¹³ Qur'an 16:125.
- ¹⁴ Kaleem Khan & Salman Khan, *Dawah via Internet: Opportunities and Challenges*, Abstract for Islam Internet Conference '99 in USA, Islamic Society of North America, Knowledge on line (KOL). <http://www.kol.org>, 1-13.
- ¹⁵ Salleh Norman & Zaki, *The cyberspace*, p. 867.
- ¹⁶ Quran: 49:13.
- ¹⁷ Mohammed Abdul Aleem, *Islamic Communications for the 21st Century*, Abstract for Islam Internet Conference '99 in USA. Islamic Society of North America. Knowledge on line (KOL). <http://www.kol.org>, 1-3.
- ¹⁸ M. Yameen Zubairi, "The Principle of Intrinsic Opportunity: Its Role in Islamization of Scientific Development", In M. A. K. Lodhi (Eds.), *Islamization of Attitudes and Practices in Science and Technology* (Herndon, VA: International Institute of Islamic Thought, 1981), pp. 47-66.
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- ²⁰ Shoukath Ali K., *The Lost Horizons of Scientific Knowledge: Muslims' Dilemma*, Proceedings of the International Conference on Values and Attitudes in Science and Technology (Vol. 2, 1996, pp. 529-538). Kuala Lumpur: Islamic Development Bank and International Islamic University Malaysia.
- ²¹ Mandaville, *Digital Islam*.
- ²² *Ibid.*
- ²³ *Ibid.*
- ²⁴ Ref. interview.
- ²⁵ Bruce Lawrence, 'Neither Civil nor Info Society Offers Muslims the Hope of Global Equity.' *ISIM Newsletter* 4, p. 3. International Institute for the Study of Islam in the Modern World (Holland), 1999, 9. See also <http://isim.leidenuniv.nl>.
- ²⁶ Mandaville, *Digital Islam*.
- ²⁷ Chandara Muzaffar, *Overview*. Paper presented at the Globalization-the Perception, Experiences and Responses of the Religious Traditions and Cultural Communities in the Asia Pacific Region, Kuala Lumpur, Malaysia, July 1997, p. vi.
- ²⁸ Mandaville, *Digital Islam*.
- ²⁹ Kaleem Khan & Salman Khan, *Dawah via Internet*.
- ³⁰ Shad Ahmad, *Islamic Web Sites: Protecting the Islamic Heritage*, Abstract for Islam Internet Conference '99 in USA, 1999, Islamic Society of North America, Knowledge on line (KOL). <http://www.kol.org>, 1-13.
- ³¹ Bukhari, Vol. 1, 49.
- ³² Chandara Muzaffar, *Overview*, p. i.
- ³³ Muhammad Ishaq Zahid, "Use of Islamic Beliefs in Mathematics and Computer Science Education", In M. A. K. Lodhi (Eds.), *Islamization of Attitudes and Practices in Science and Technology* (Herndon, VA: International Institute of Islamic Thought, 1981), p. 92.
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