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Ethical Issues in Computer use: A Study from Islamic Perspective

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Ethical Issues in Computer use: A Study from Islamic Perspective

Abdul Kadar Muhammad Masum

Abstract - Computer users are continuously facing ethical challenges as society adopts new and increasingly complex tools and technologies. These ethical challenges can be managed by Islamic code of life. In this paper, we have studied and tried to identify, how computer affects the ethical issues of the society. In this regards, we have traced some highly related issues to the ethics of computer usage, namely – misuse of time, honesty and integrity, privacy, security, intellectual property right, and computer crime. We have also tried to explain these issues in the light of Qur'an and Hadith. At the end of this paper, we have also suggested some measures that can help in promoting proper use of computer facilities by the Muslim masses without compromising the Islamic principles.

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I. INTRODUCTION

With the spectacular growth of high-technology industry, computers and communication have become the backbone of our new life style. Computers have created a host of potentially new misuses, and the computer-related crime has become a growing phenomenon that involves traditional criminal activities such as theft, fraud, forgery and mischief. So there are increasing opportunities for consciously or unconsciously engaging in unethical or illegal behavior.

Ethics is a branch of philosophy that is concerned with human conduct, more specifically the behavior of individuals in society. Ethics examines the rational justification for our moral judgments; it studies what is morally right or wrong, just or unjust (Stead and Gilbert 2001). Computer ethics can be defined as a dynamic and complicated field of study involving facts, concepts, policies and values regarding rapidly increasing computer technologies (Peterson, 2002). Computer ethics focuses on human endeavors influenced or directed by use of computer technologies (Kizza, 2002). Sending an e-mail, writing a program script, creating a database, generating graphics, designing software, processing information and buying software are such behaviors carrying ethical problems within their natures.

Islam places the highest emphasis on ethical values in all aspects of human life. Islamic teachings strongly stress the observance of ethical and moral

code in human behavior. Moral principles and codes of ethics are repeatedly stressed throughout the Holy Qur'an. Allah Says: "You are the best nation that has been raised up for mankind; You enjoin right conduct, forbid evil and believe in Allah" (Qur'an, 3:110). Besides, there are numerous teachings of the Prophet (PBUH) which cover the area of moral and ethical values and principles. The Prophet (PBUH) also says: "I have been sent to perfect noble character." (Sunnan Al- Bayhagee: 21301) This statement makes it clear that one of the reasons behind the Prophet's Mission was to elevate and perfect the moral character of the individual and society at large.

II. LITERATURE REVIEW

Research about computer ethics is not isolated from research about Islamic ethics. It is observed that most of the currently accepted western basic principles of ethics in research are consistent with the instructions of Islam. Walter Maner in mid 1970s defined the computer ethics as one which examines "ethical problems aggravated, transformed or created by computer technology" (Bynum, 1993). Moor (1985) states the computer ethics comprises: "(i) identification of computer-generated policy vacuums, (ii) clarification of conceptual muddles, (iii) formulation of policies for the use of computer technology, and (iv) ethical justification of such policies". Mason (1986) introduced four broad categories of information era ethical issues: privacy, accuracy, property, and access, otherwise known as PAPA. Peslak (2006) surveyed more than 200 individuals and verified that the four original PAPA issues were still viewed as timely and important ethical concerns. Using ethical dilemma scenarios, Conger (1995) conducted research that produced five clusters of IT related ethical issues. Two of the five clusters represented issues of responsibility and motivation which were not addressed in Mason's essay. In the year 1992, ACM adopted a new set of ethical rules called "ACM code of Ethics and Professional Conduct" which consisted of 24 statements of personal responsibility (Anderson, 1993). Gorniak-Kocikowska (1996) came up with the idea that computer ethics will eventually become a global ethical system and soon after, computer ethics would replace ethics altogether as it would become the standard ethics of the information age.

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Khanifar (2012) list a series of ethical issues that have strong ramification for information technology e.g., users' rationality, self-control, transparency, honesty, and privacy. These factors are among the core values that penetrated information technology in the form of a new set of ethics e.g., "cyber ethics", "internet ethics", "computer ethics", to name but a few. Their common denominators seem to be efficacy, proficiency, responsibility, and accountability. If these values and practices are not reinforced during one's educational training or one's intellectual development as a student, the false play is more likely to flow over into their professional environment (Underwood and Szabo, 2003). In organizations, professionals' awareness and organizational policies of ethical use of technologies often lag behind their rapid advancement. Hence, professionals at workplace may often be confronted with ethical dilemmas associated with technology that were perhaps not present a few decades ago. Based on a search result on articles published in journals, there appears to be a scant number on attitudes about ethical computer use and Islam. Al-A'ali (2008) concurred that "the relationship between information technology ethics and Islam has received very little or no attention". Some researchers who had attempted to study ethical computer use tended to conclude that personal religiousness, individuals' uncertainty, personal values and moral judgments influenced ethical behaviour in lieu of the lack of corporate code of ethics (Leonard and Cronan, 2005). Clark and Dawson (1996) highlighted the importance of religiousness as an influence of ethical judgments. Khalil and Abu-Saad (2009) found that there was a significant correlation between Islamic work ethic and individualism scales among Arab college students in Israel. Kumar and Rose (2010) investigated the influence of Islamic work ethic on innovation capability in the Malaysian public sector. They found support for the relationship.

III. OBJECTIVES OF THE STUDY

The foremost objective of the study is to link Islamic work ethics to computer use ethics. In addition, this paper will give intent look at;

- i. To review the underlying concepts of ethics and Islamic ethics for computer usage.
- ii. To find out some highly related ethical issues of computer use and its explanation in point of Qur'an and Hadith.
- iii. To propose some suggestions for managing these ethical issues in Islamic way.

IV. METHODOLOGY OF THE STUDY

The present study is based on secondary data particularly the literatures embodied Shariatic rules and non-Shariatic approaches for computer user. This paper makes a brief analysis of the traditional theories and

fundamental concepts of Computer ethics. The secondary data are derived from both Islamic and conventional literatures in this regard. It is worth mentioning here that the Holy Qur'an and traditions of Prophet (PBUH) have been chosen as good references of this study. Other relevant literatures are also studied and examined carefully to fulfill the defined objectives taken in the present study.

V. ETHICAL ISSUES IN COMPUTER USE

The Islamic ethics inspire the people to obey work ethics as well as the Computer ethics. In using computer, the users should focus whether they are violating any ethical issues such as –use of time, honesty and integrity, privacy, security, intellectual property right, and etc. Here all of the issues relating ethical concerns are illustrated in the light of Islamic principles and conventional ethics.

a) Use of Time

A recent survey in USA, conducted by the Kaiser Family Foundation, indicates that 8-18 year olds spend an average of 7 hours 38minutes using entertainment media across a typical day (Kaiser, 2010). Recent studies indicate that on average, teenagers in United Kingdom spend 31 hours a week in Internet and nearly 2 hours a week viewing pornography (The Telegraph, Feb 10, 2009). In Saudi Arabia there is a study that shows 20% of the children exposed to pornography activity every year (Ministry of Justice, 2011). Google, the world's most popular Internet search engine, has found in a survey that of the top 10 countries - searching for sex-related sites - six were Muslim, with Pakistan on the top. The other Muslim countries are Egypt at number 2, Iran at 4, Morocco at 5, Saudi Arabia at 7 and Turkey at 8. Non-Muslim states are Vietnam at 3, India at 6, Philippines at 9 and Poland at 10 (Wikiislam, 2013). This is very unfortunate and it indicates clearly how morality has been seriously degraded amongst the Muslims as a result of misusing computer facilities.

Our attitude towards time indicates our attitude towards the value of the capital of life. Allah Says: *"I swear by the time. Most surely man is in loss. Except those who believe and do good works, and exhort one another to accept truth, and exhort one another to be steadfast"* (Qur'an, 103:1-3). If we want to purchase something, we require financial capital; and if we want to do something in life, we require the capital of life, time. That is why the Qur'an exhorts us to value the time we have before life is up. To express the importance of time utilization, Prophet Mohamed (PBUH) says: *"A human being will remain standing on the Day of Judgment until he is questioned about his (time on earth) and how he used it; about his knowledge and how he utilized it; about his wealth and from where he acquired it and in what (activities) he spent it; and about his body and how*

he used it." (Al-Tirmidhi, Hadith 148) Verily, time is very important for our success both in this temporary world and the eternal world to come. If we waste time, if we abuse it, then we waste and abuse our lives. In the Life Hereafter we will be among the losers, who will suffer the torments in the Hell Fire, if Allah the Almighty will not forgive us. Therefore, if we really give value to our lives then, we must give due value to the importance of time.

b) *Honesty and Integrity*

Integrity means that data cannot be modified without authorization. Integrity is violated when an employee accidentally or with malicious intent deletes or tempers important data files, when an employee is able to modify his own salary in a payroll database, when a computer virus infects a computer, when an unauthorized user vandalizes a website, when someone is able to cast a very large number of votes in an online poll, and so on. Only the necessary amount of information should be collected and should not be fabricated or should not be used without permission of the individual. This is the honest and integrated approach to handle one's information in a workplace. In recent case, Media mogul Rupert Murdoch a British journalist and owner of "News of the world", who falls in this problem, because of dishonesty in performing his duty by sharing others information through Telephone and the Chief executive Dow Jones has resigned from her post (Wilkinson, 2011).

The Holy Qu'ran says: *"Woe to those who deal fraudulently, those who when they have to receive by measure from men, exact full measure. But when they have to give by measure to men, they give less than due. Don't they ever think that they will be called to account on a mighty day?"* (Qur'an, 83:1-5). A Muslim should not make a product or to provide service but cheats through false information using Internet as it is easy and less costly, Allah will without doubt see that and He will judge accordingly. Allah's Apostle Muhammad (PBUH) said: *"The honest Muslim trustee who spends what he is commanded to do and he gives that in full with his heart overflowing with cheerfulness and he gives it to one to whom he is ordered, he is one of the givers of charity."* (Sahih Muslim, Book 5, Hadith 2231) In another hadith, Prophet Muhammad (PBUH) said: *"Any man whom Allah has given the authority of ruling some people and he does not look after them in an honest manner, will never feel even the smell of Paradise."* (Sahih Bukhari, Book 89, Hadith 264) From above two hadiths, it is clear that a Muslim must be aware to his duty and responsibility. He should not do any work that is painful to another human being.

c) *Privacy*

Privacy is defined as the right of people not to reveal information about them, and the right to keep personal information from being misused. Information is increasingly valuable to policy makers; they covet it even

if acquiring it invades another's privacy. According to a recent Eurobarometer (IP/11/742), 70% of Europeans are concerned that their personal data may be misused. They are worried that companies may be passing on their data to other companies without their permission. 74% of Europeans think that disclosing personal data is increasingly part of modern life, but at the same time, 72% of Internet users are worried that they give away too much personal data, according to the Eurobarometer survey. They feel they are not in complete control of their data. This erodes their trust in online and other services and holds back the growth of the digital economy in general (Eurobarometer, 2011).

Without the permission of owner, any information cannot be accessed. Information may be the property of an individual, organization or data of national or international interest, which can be used against humanity or spreading terror in the society. Allah says in His holy book: *"O believers! Do not enter houses other than your own until you have sought permission and greeted their inmates"* (Qur'an, 24: 27). So from the Islamic principles you cannot access the properties others without their permission one can not disclose other privacy, this is the Islamic approach to the rights of privacy. Allah says in another chapter of Qur'an: *"O believers! Avoid immoderate suspicion, for in some cases suspicion is a sin, Do not spy on one another"* (Qur'an, 49:12). Prophet Mohammad (PBUH) said: *"O people, who have professed belief verbally, but faith has not yet entered your hearts: Do not pry into the affairs of the Muslims, for he who will pry into the affairs of the Muslims, Allah will pry into his affairs, and he whom Allah follows inquisitively, is disgraced by Him in his own house"* (Abu Dawud) In this Hadith, the Prophet tells us that it is prohibited for any person to come (physically) into ones property without permission or logically into ones computers resources for curiosity or to look at their contents without a prior permission of the owner and he should be aware of the limit of the given permission.

d) *Security*

Technology presents us ever increased security challenges. The security on the Internet and in computer networks, concerns the communication which can be accessed and manipulated by unauthorized intruders, who have no right to the information passed during the communication. Most countries in North America and Western Europe are among the countries with the highest Internet penetration rates. Cybercriminals make money from users in these regions by stealing their banking data, as well as by deceiving users and extorting money. Statistics show that many computers in these regions are infected with bots which collect banking information, spread rogue antiviruses and spoof user traffic: users from these regions accounted for over 70% of the victims of the Sinowal bot attacks, over 40% of the victims of attacks by SpyEyes bots that

collected banking details, and 67% of the rogue antivirus detections in the first half of 2012 (Securelist, 2012). Chart 1 and Char 2 shows the penetration rate of

Internet based on a world population of 7,017,846,922 and 2,405,518,376 estimated Internet users on June 30, 2012 (Internetworldstats, 2013).

Chart 1 : Internet users in the world, distribution by world region 2012

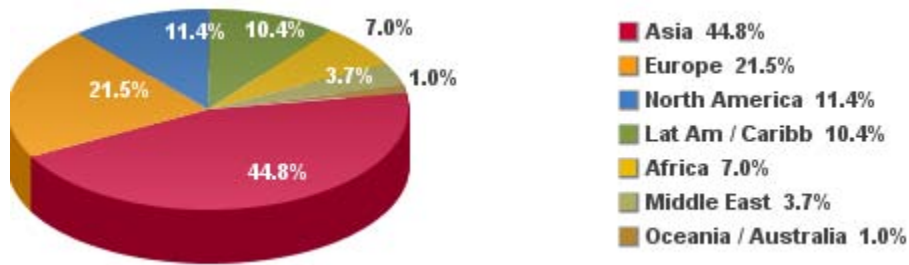
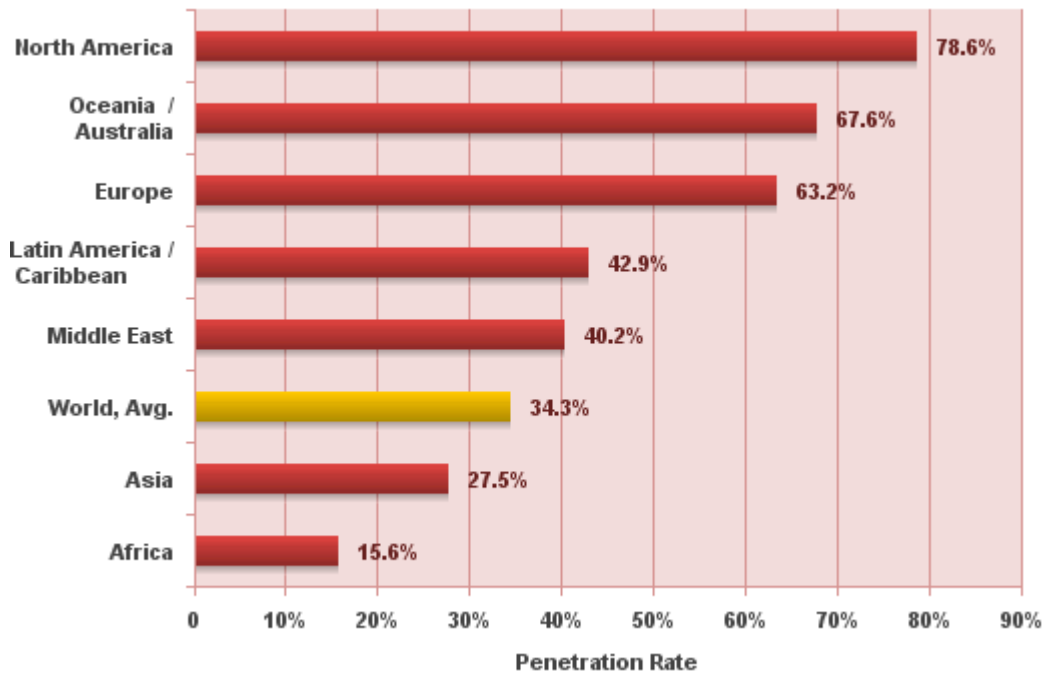


Chart 2 : World Internet penetration rate by geographic region, 2012



In Islam, breaking one's security system, it may be computer security, is prohibited. Qur'an says: "Let there arise out of you a band of people inviting to all that is good, enjoining what is right, and forbidding what is wrong; They are the ones to attain felicity" (Qur'an, 3: 104). Further, In Islam punishment is the best way to safeguard society against crimes and it is considered as social necessity. Allah says in Surah An Nisa: "Whoever works evil, will be requited accordingly" (Qur'an, 4:123). There are strict penalties for criminals according to Islamic law and these penalties are essential for peace, security disruption and frightening innocent people in a society. Allah's Messenger (PBUH) stated in his farewell speech: "He will not enter Paradise whose neighbor is not secure from him wrongful conduct." (Sahih Muslim, Book 1, Number 74).

e) Intellectual Property Right

Intellectual Property is considered to be intangible property created by individuals or corporations that is subject to protections under trade secret, copyright, and patent law. These are any type of software, song and its lyrics, e-book, idea, and others products that are intangible. Information Technology has made it difficult to protect intellectual property because computerized information can be so easily copied or distributed. A survey sponsored by the Business Software Alliance (2007) indicated that 52 percent of university student respondents in the United States and 25 percent of academics believed that the use of pirated software (swapping or downloading digital copyrighted files such as software, music, and movies without paying for them) was acceptable, even in the workplace. Siponen and Vartiainen (2005) found that 72.5 percent of Finnish students surveyed had

copied unauthorized software. The table 1 shows that the United States of America is the least pirated software user on the other hand Armenia has the highest number of pirated software user followed by Moldova, Azerbaijan, and Bangladesh.

Table 1 : Ten Highest and Lowest Country Wise Percentage of Software Piracy (Nationmaster, 2013)

Highest			Lowest		
No	Country	%	No	Country	%
1	Armenia	93%	1	Switzerland	25%
2	Moldova	92%	2	Austria	25%
3	Azerbaijan	92%	3	Denmark	25%
4	Bangladesh	92%	4	Belgium	25%
5	Zimbabwe	91%	5	Sweden	25%
6	Sri Lanka	90%	6	Finland	25%
7	Yemen	89%	7	Japan	23%
8	Libya	88%	8	New Zealand	22%
9	Venezuela	87%	9	Luxembourg	21%
10	Iraq	85%	10	USA	20%

Islam encourages Muslims to learn, but it also respects the laws of ownership. Plagiarism, piracy, misquotation, taking other people's property etc. are all nothing but theft, and deception. Islam advocates for seeking of one's permission before using his or her resource or property. Allah says in the Holly Qur'an: *"O you who believe! Do not consume your property among yourselves unjustly unless it be a trade amongst you, by mutual consent. And do not kill yourselves (nor kill one another). Surely, Allah is Most Merciful to you"* (Qur'an 4:29). The prophet Muhammad (BUPH) said: *"No thief is a believer at the time when he is stealing."* (Sahih Muslim, Book 1, Hadith 104) It is not permitted to get benefits of the contents of a computer or through it without permission. Prophet Mohammad (BUPH) said: *"It's prohibited to take the Muslim wealth without his complete permission"* (Al-Baihaqi, 1994). Unfortunately some Muslims are also involved in various kinds of online theft forgetting the teachings of their religion, Islam.

f) Computer Crime

The term "Computer crime" includes computer-related crime, computer crime, Internet crime, e- crime, digital crime, high-tech crime, online crime, electronic crime, computer misconduct and cyber crime. The attacks take different forms of cyber crime, such as hacking, the distribution of viruses, Trojans and worms, cyber-vandalism, password thefts, Click Fraud, Identity Theft, Spoofing, Sniffing and denial of service attack (DoS). The annual Norton Cybercrime Report (2012), based on self-reported experiences of more than 13,000 adults across 24 countries, calculates the direct costs associated with global consumer cybercrime at US \$110 billion over the past twelve months. The highest rate of cybercrime was found to be in the United States. The cost of global cybercrime has been estimated at \$ 114

billion annually; rising to \$388 billion when financial losses and time lost are included. (Baesystemsdetica, 2012).

Shar'iah has a very high level of proof for the most serious crimes and punishments. If proof is not as specified then the crime must be considered a lesser crime. The major myth is that judges in Islamic nations have fixed punishments for all crimes. The judge under *Shar'iah* is not bound by precedents, rules, or prior decisions as in English common law. The Almighty says *"Surely, he who appears before his Lord as a criminal, there is hell for him, in which he will neither die nor will he live. And he who will appear before Him as a faithful, who has performed good deeds-for all such people there are high positions, ever green paradise, beneath which canals will be flowing; they will live in them forever. This is the reward for him who adopts purity."* (Qur'an, 20:74-76) Some people asked Allah's Apostle, *"Whose Islam is the best? i.e. (Who is a very good Muslim)?"* He replied, *"One who avoids harming the Muslims with his tongue and hands."* (Sahih Bukhari , Book 2, Hadith 10) From the above Qur'anic Ayah and scenario, it is a teaching to the Muslims, not to violate any law set by Allah and access others information unethically (hacking), entering to use others recourse and create disturbance (Virus) and violate one's privacy especially of any state (Information warfare) and every time try to lead right and fair way of life.

VI. RECOMMENDATIONS

There are some processes that can play a great role to reduce the unfair means of using computer resources:

1. Islam reinforces the sanctification of one's heart and mind to make it ready for any practices. One has to submit himself or herself to the Allah (SWT) completely. Takwah (farness of Allah) must be achieved as the main characteristic of a Muslim so that he/she doesn't deed any offence which harmful for others. As He said in the holy Qur'an: *"O you, who have believed, enter into Islam completely (and perfectly) and do not follow the footsteps of Satan (Devil). Indeed, he is to you a clear enemy."* (Qur'an, 2: 208) This divine voice only, if someone follows, can make him or her perfect and keep away from anything unjust and unethical. To ensure the full enforceability of ethical practices their needs a well organized Islamic society and finally an Islamic state.
2. Islamic moral values should be practiced in family life thus a child can grow up with Islam from his early life. Therefore, safe and secure environments will be ensured for users, especially children and young person;
3. Policies and legal regulatory frameworks comprising Shariatic view at the national level that are

- consistent with existing or developing international legal instruments;
4. Government can introduce computer crime law based on Islam which addresses the individual before the crime is committed and hence is more of prevention than a cure.
 5. Tracking softwares can be installed to monitor and to control computer users' daily activities with computer resources.
 6. High levels of awareness of information security and cybercrime issues amongst users at home, in government and educational institutions, in the private sector, and amongst legal officers;
 7. Effective regional mechanisms for detection and preventing cybercrime and improving protection against, detection of, and responses to, cybercrime; Secure information systems, networks and transactions in the public and private sectors;

VII. CONCLUSION

New development in technology and the creation of new media have good and bad effects to the society. The good effects are people can interact and work easily by using technology. In fact, the teachings of Islam can be conveyed to anybody without border. However, the bad effects are the society is exposed to many illegal and immoral activities such as the commission of computer crimes, degradation of moral value, social crises, destruction of marriage institution and insult on Islam. I have tried to show that there are some issues and problems that are unique to computer ethics. It is very important to develop the Islamic outlook to computer ethics especially since we know that most Islamic countries place it at the center of their legal codes for computer crimes like Saudi Arabia, Sudan and Iran. Facts decide the importance of the Islamic law to minimize computer crimes, by providing a worldly punishment as well as that in the hereafter.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Al-A'ali, M.(2008). Computer ethics for the computer professionals from an Islamic point of view, *Journal of Information, Communication & Ethics in Society*, 6(1), 28-45.
2. Al-Baihaqi, Ahmad Bin Al-Husain (1994). *Al-Sunan Al-Kubra*, (In Arabic).
3. Anderson, R.E., D. G.Johnson, D.Gotterbarn and J.Perrolle, (1993).Using the new ACM code of ethics in decision-making. *Commun. ACM* 36 (2), 98–107
4. Business Software Alliance. (2007). *Global software piracy study*. Retrieved April 4, 2010, from <http://www.bsa.org/idcstudy.aspx>
5. Bynum, (1993). Computer Ethics in the Computer Science Curriculum. In: Bynum, Terrell Ward, Walter Maner and John L. Fodor,(eds.) *Teaching Computer Ethics*, Research Center on Computing & Society.
6. Conger, S., K. D.Loch and B. L. Helft, (1995). Ethics and information technology use: A factor analysis of attitudes to computer use. *Information Systems Journal*, 5, 161-184.
7. Gorniak-Kocikowska, Krystyna (1996). The Computer Revolution and the Problem of Global Ethics. In *Baesystemsdetica*, (2012). Available: http://www.baesystemsdetica.com/uploads/resources/ THE_COST_OF_CYBER_CRIME_SUMMARY_FINAL_14_February_2011.pdf. [Last Access time : 15-04-2013].
8. Bynum and Rogerson (1996) *Global Information Ethics*, Opragen Publications, 177-90. *Internet World Stats*, (2013). *Statistical Database*, [Online]. Available: www.internetworldstats.com/stats.htm, [Last Access time : 18-05-2013].
9. Kizza, J.M. (2002). Computer network security and cyberethics, McFarland, Jefferson, N.C. Khanifar, H., G. Jandaghi, and H. Bordbar, (2012). The professional and applied ethics constituents of IT specialists and users. *European Journal of Social Sciences*, 27(4), 546-552.
10. Khalil, M. and I.A.S aad, (2009) "Islamic work ethic among Arab college students in Israel", *Cross Cultural Management: An International Journal*, 16(4), 333 – 346.
11. Kumar, N., and R.C.Rose, (2010). Examining the link between Islamic work ethic and innovation capability. *Journal of Management Development*, 29(1), 79-93.
12. Kaiser Family Foundation Survey, (2010). *Generation M2:Media in the Lives of 8 to 18-Years Olds*, Kaiser Family Foundation, Washington, [online] Available: www.kff.org/entmedia/upload/8010.pdf [Last Access time : 12-10-2011].
13. Kaspersky Security Bulletin. *Statistics 2012*, (2012). Available: http://www.securelist.com/en/analysis/204792216/Kaspersky_Security_Bulletin_Statistics_2012. [Last Access time : 10-04-2013].
14. Leonard, L.N.K. and T.P. Cronan, (2005). Attitude toward ethical behavior in computer use: A shifting model. *Indus. Manage. Data Syst.*, 5: 1150-1171.
15. Moor, J. H. (1985) .What Is Computer Ethics?" In Bynum, Terrell Ward, ed. (1985) *Computers and Ethics*, Blackwell, 266-75. [Published as the October 1985 issue of *Metaphilosophy*].
16. Mason, R. O. (1986). Four ethical issues of the information age. *MIS Quarterly*, 10(1), 5-12.
17. Ministry of Justice (2009). Available: <http://www.moj.gov.sa/adl/ENG/attach/28.pdf> [Last Access time : 10-10-2012].
18. Muslim Statistics (Pornography), (2013). [Online]. Available: http://wikiislam.net/wiki/Muslim_Statistics_%28Pornography%29, [Last Access time: 18-05-2013].

19. Nationmaster, (2013). Available: <http://www.nationmaster.com/graph/crime/crime-software-piracy-rate>. [Last Access time : 15-04-2013].
20. Peslak, A. (2006). PAPA revisited: A current empirical study of the Mason framework. *Journal of Computer Information Systems*, 46(3), 117-123.
21. Peterson, D. (2002). "Computer ethics: The influence of guidelines and universal moral beliefs", *Information Technology & People*, 15(4), 346-361.
22. Stead, B. and J. Gilbert, (2001). 'Ethical Issues in Electronic. Commerce', *Journal of Business Ethics* 34(3), 75-85.
23. Siponen, M. T., and T. Vartiainen, (2005). Attitudes to and factors affecting unauthorized copying of computer software in Finland. *Behaviour & Information Technology*, 24(4), 249-257.
24. Special Eurobarometer (EB) 359, Data Protection and Electronic Identity in the EU (2011). Available: http://ec.europa.eu/public_opinion/archives/ebs/ebs_359_en.pdf. [Last Access time : 15-02-2013].
25. Teenagers 'spend an average of 31 hours online, (2009). The Telegraph [Online], Available: <http://www.telegraph.co.uk/technology/4574792/Teenagers-spend-an-average-of-31-hours-online.html>, 2009 [Last Access time : 17-05-2013].
26. Underwood, J. and A. Szabo, (2003). Academic offences and e-learning: individual propensities in cheating. *British Journal of Educational Technology*, 34(4), 467-477.