

Effect of Internet Drawbacks on Moral and Social Values of Users in Education

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Abstract: In this era of computer and knowledge; the moral and social values have essential affects on people and education process in the society. Internet, mobility and multimedia are important information technology tools that are used in education industry. Internet has an important effect on students, researchers, academic staffs, non-academic staffs and education process. Although Internet has an appreciated role in enhancing education process but it still has some drawbacks and harmful impacts that affected this role such as slow data accessing, retrieving to a huge volume of related data, existence of not trusted and harmful information, have bad impact on ethical, religious and social concerns. This paper is an analytical survey to study: the drawbacks of internet that affects moral and social aspects of internet users in university. To solve the problem, the paper proposes a Smart Data Filtration (SDF) tool. It is a data mining and fire-wall supporting tool, which has the ability to filter harmful data according to rules and regulations related to moral, religious, and social concerns. This tool will lead to enhance the internet usage and performance in education.

Key words: Internet, Internet drawback, Harmful data, Smart Data Filtration, fire-wall.

INTRODUCTION

Since the last few decades; computer and information technology with multimedia and mobility facilities are rapidly used in education (Wong, 2009; Wong, 2009; Wong, 2009; Hillman, 1998; Shuman, 1998). Educated people become a driving force for great change in all institutions (Duderstadt, 2002). After more than six decades of computer usage and quarter century of internet, the higher education should evolve rapidly to create a culture of learning in which education opportunities become pervasive through the use of information technology with multimedia and mobility facilities. When personal computers started, more than three decades ago, many people thought that computers would revolutionize: education, computer-based teaching and learning would become the savior of education and the solution to falling test scores. Literature (Hardin,) shows that some people believe a revolution is taking place in education in the way people learn and the way instruction is given. Internet, multimedia and mobility usage in education process nowadays is expanding rapidly in teaching, learning, and researches. Although internet has a great role in improving the education process but as any technology it still has some drawbacks and harmful impacts. Since the moral, ethical, religious and social values have essential affects on the education process in any society, we have to study the drawback and harmful impact of internet on these values. This paper is a continuation of previous research work (Shihab A. Hameed, 2002; Hameed, 2001; Shihab A. Hameed, 2006), which shows a framework for eliminating weakness and harmful impacts in internet. This paper is an analytical part for a survey done in sample of the higher education institutes. It focuses on studying some of the main factors that have bad effect on moral and social aspects of internet users, determine how users get such harmful data, and finally showing the user's view to do filtration for such harmful data. The paper proposes a guideline solution to overcome such problem.

Internet ad Education:

Internet has been in existence and began to extend into institutes about a quarter century ago. Integrating internet, mobility, and multimedia as well as other software powerful facilities lead to tremendous potential on the education process with special impact on students, lecturers, and researchers. The different studies, surveys, and literatures reviews (Wong, 2009; Wong, 2009; Wong, 2009; Hillman, 1998; Shihab A. Hameed, 2002; Hameed, 2001; Shihab A. Hameed, 2006; Curtin, 1998; Lehnert, 1999; Kroenke, 2000; Rob, 2000) show the importance of internet in education process. We can summarize the importance of internet as:

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- a. Offering a flexible and user friendly education tool that serve different parties of education process including educators, students, researchers, and administrators.
- b. Offering a powerful education tool that integrates internet, mobility, database and multimedia facilities.
- c. Facilitate Searching and Accessing (Curtin, 1998; Lehnert, 1999): Internet facilitates the searching and accessing of information in different areas of knowledge. Also facilitates connection, discussion and cooperation between researchers or other users, which leads to improve researches and knowledge.
- d. Providing New Tools (Curtin, 1998): Applications and materials can be constructed in new way by using the advanced available tools. Some of the emerging tools will provide incredible opportunities to expand knowledge and may even change the way people read, think, and learn.
- e. Easy Publication and Presentation (Lehnert, 1999; Hameed, 2001): Internet offers an easy publication and presentation process. Individuals and organizations can easily use the internet to publish or to present their products.
- f. Video Conferencing & Distance Learning (Rob, 2000; Hardin; Hillman, 1998): Internet is one of the important tools used in video conferencing and distance learning processes.
- g. Virtual and Smart Learning: Internet is an important tool used in Virtual and smart schools, universities and learning projects.

A conclusion is that the Internet integrated with mobility, database and multimedia becomes a fully robust environment in education sector.

Drawbacks of Internet in Education:

Although the Internet is an important tool that can be used to improve the education process but there are some weaknesses, drawbacks and harmful impacts. The different studies, surveys, and literatures reviews (Hillman, 1988; Day, 1988; Vargo, 2010; Porter, 1988; Billington, 2006; Morrissey) can be summarized as:

- a. Slow Searching and Retrieving (Hameed, 2001; Lehnert, 1999; Kroenke, 2002): Internet is slow in searching and retrieving of information because of:
 - There is no efficient classification of source data and there are no sub-directories for certain academic disciplines that direct users, academic, to the useful sites.
 - There is no efficient classification of the internet users, which can help in data filtering and retrieving.
 - The mass feeding of resource information, which causes an overload on the Internet users, academic staff and students.
 - The huge volume of Internet resource data files because of the increasing usage of multimedia data files such as video, audio, and graphical.
 - The webs or internet become more commercialized so that searching through the web site becomes a growing problem.
- b. Lack of security level:
 - The increasing rate of attacks for web-based applications leads to reduce systems' security as well as the users' privacy, and confidentiality.
- c. Lack of Confidence (Kroenke, 2002; Shuman, 1998): The user has lack of confidence in the internet's publications because:
 - There is no standard policy to control the publishing procedures.
 - Individuals and organizations can publish any information easily.
 - The copyright is almost impossible to enforce which leads to discourage many academic staff from using the Internet in their publication.
- d. Harmful and Unsafe Usage of Internet (Hameed, 2001; Shihab A. Hameed, 2006; Kroenke, 2002; Vargo, 2010):
 - The increasing of unethical websites and contents that are accessed through internet.
 - Statistics shows that teenagers are much heavier internet users than the adult, they were more like to use the Internet to play games, listen to music, and to meet new people.
 - Many educators and researchers pointed out this problem and they recommended to buildup such system to avoid accessing harmful information.
 - The unrestricted and heavy usage of Internet by the children and adult could affect the social culture and religious concepts also could result to loneliness and depression.
- e. Reducing Student Activity (Billington, 2006): The student could get a ready solution of course exercises and assignments from Internet, which result to reduce student capability of thinking, understanding, and solving problems. And also might lead some students not to turn up to the lectures or to the tutorial section.

- f. Insufficient Educational Administration (Porter, 1988): There are many factors affecting a slow implementation of computing and communication technology in education institutes, including administrations with no knowledge of its value or no willingness to realign institute budgets to include computational technology.
- g. Unsuitability of Networks Infrastructures (Hillman, 1998; Hameed, 2001):
 - The network infrastructures in many countries or organizations are not suitable to the current and future usage of Internet applications especially that based on using multimedia data.
 - Many users still use slow modems and telephone lines in connection with network.
- h. Missing & Invalid URLs (Affonso):
 - Changing or deleting URLs related to Internet information will lead to loss of the contents of these URLs.
 - Imprecise writing for URL name in literatures will make the accessing to these URLs difficult or impossible.

Short Life of URLs (Hameed, 2001): The average life of the URLs is approximately 6 months, which is short and make searching to find the required information not easy task.

Enhancement of Internet Usage in Education:

To improve the Internet usage in education, we need to overcome the above weaknesses, drawbacks and harmful impacts. This paper provides some proposals, which include:

- a. Improve Data Searching and Retrieving (Lehnert, 1999; Borough,):
 - Having more powerful methods to classify and organize the resource information.
 - Classifying the users into different categories according to some factors such as profession, age, gender, etc. and offering the data according to these categories.
 - Developing a powerful intelligent data searching, retrieving, or mining engine to improve the current searching and retrieving process. The engine should consider the multimedia data types.
 - Controlling the commercialized usage to reduce its negative effect on users.
- b. Improve Confidences in Internet Information:
 - Constructing distributed databases, as an internet resource data, by confident organizations and committees.
 - The resource data should be classified according to its confidence category and attached the degree of confidence with the retrieved information to the users.
- c. Eliminate Harmful Data:
 - The data retrieval engine should consider the ethical and religious concerns when retrieving data to the internet users.
 - Improving the censoring and filtering methods of harmful and unwanted data in order to prevent its affect on reducing data retrieval speed.
 - Legislate rules for right Internet usage by law, sociologists, and religious experts to reduce the deliberately harmful usage of Internet, which have bad impacts on other users.
- d. Increase Student Activity:
 - Having integrated committees to prepare different courses on Internet; these committees should include specialists in different topics, curriculums, information technology, social and religious affairs.
 - Categorizing the offered courses related to information according to the user category and eliminates the offering of exercises and assignments solutions to the students.
- e. Improve Network Infrastructure (Hillman, 1998; Hameed, 2001; Shihab A. Hameed, 2006):
 - Improving the capabilities of the network infrastructure for the countries and organizations to suite the transferring of huge volume of data such as video, audio, graph, and text. This will lead to improve the information searching and retrieving.
 - The individuals have to use other advanced alternatives to the currently used modem or telephone lines.
 - Improving network will help to increase and improve the usage of video conferencing and distance learning.
- f. Improve Educational Administrations:
 - Make the educational administrative ready to implement the computing and communication technology in education institutes. This is done by appreciating their participation in seminars related to information technology implementations and its important role in improving the education process.
- g. Prepare Advanced Researches and Studies:
 - Having more advanced survey, researches and studies, by integrated groups of specialists in internet related disciplines, on Internet usage and its impact on education process. The main goal of these studies is to

determine the Internet impacts such as its efficiency usage in education, its acceptance by student, and its economic impact then propose the suitable solutions. This is very important, specially, for the countries, which are still under development and have limited usage of the Internet in education.

Survey Result of Internet Weaknesses:

This paper is part of a survey to study internet impacts on users in higher education. To study the anti-ethical and anti-social harmful data impacts on internet users in higher education, we selected a sample of Internet users in several Malaysian universities including IIUM. The internet users (students, academic staffs & non-academic staffs) represent different nations, races, cultures, genders, experiences, ages and qualifications. This makes the selected sample of internet users more reflecting the population under study. The chosen sample consists of 180 users: 156 students and 24 non students (including 122 males and 58 females). The sample selected randomly from more than one faculty and department. This paper will focus on survey results that are related to three main categories:

- The anti-ethical and anti-social harmful data factors.
- How internet users get such harmful data.
- The Internet user’s acceptance to do filtration for such harmful data.
- The survey results for the above categories are summarized in tables (1-5).

The following is the percentage of Internet users (Student, Not Student) whom consider the specified factor as harmful data. A histogram representation for the survey result is shown in Figure (1) .It shows that:

- 54% of students and 36% of non-students consider the anti-religious related as harmful data.
- 18% of students and 30% of non-students consider the Anti-cultural related as harmful data.
- 74% of students and 72% of non-students consider the sexual related as harmful data.
- 40% of students and 59% of non-students consider advertisements or Commercial announcements related as harmful data.

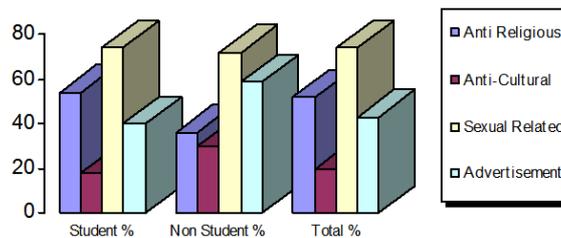


Fig. 1: Harmful Data Factors Histogram.

Internet’s users get such harmful data in different ways. These ways include the users searching for such harmful data, the users getting such harmful data accidentally, or such harmful data is sent to the users through an e-mail. The histogram of how a user gets harmful data is represented in figure (2). It shows that:

- 12% of students and 22% of non-students getting the harmful data through searching for it.
- 53% of students and 45% of non-students getting the harmful data accidentally.
- 75% of students and 72% of non-students getting the harmful data through e-mails.

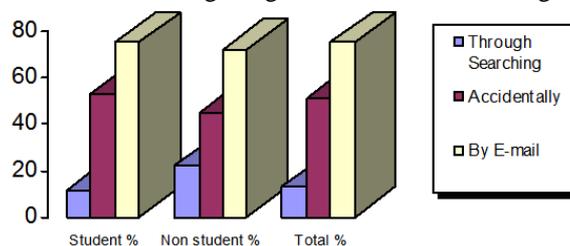


Fig. 2: Ways of getting Harmful Data Histogram.

Figure (3) shows the total internet users acceptance to do filtration for harmful data. The levels of acceptance include strictly yes, yes, or indifference while a not-acceptance level includes strictly no or no. Figure (3) is a histogram representation for filtration acceptance. It shows that:

- 85 % of total users accept to do the filtration of anti-religious data while only 15 % of total users not accept the filtration of anti-religious data.

- 80 % of total users accept to do the filtration of anti-cultural data while only 20 % of total users not accept the filtration of anti-cultural data.
- 84 % of total users accept to do the filtration of sexual related data while only 16 % of total users not accept the filtration of sexual related data.
- 71 % of total users accept to do the filtration of advertisement or commercial announcement data while only 29 % of total users not accept the filtration of advertisement or commercial announcement data.

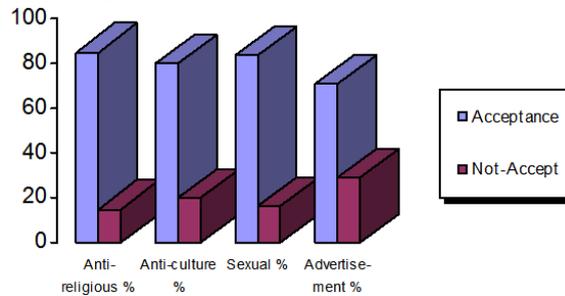


Fig. 3: Filtration Acceptance Histogram (Total).

Figure (4) shows the Internet users (students) acceptance to do filtration for harmful data. Figure (4) is a histogram representation for filtration acceptance. It shows that:

- 90% of students accepted the filtration for the Anti-religious related data while only 10 % of students not accepted the filtration of anti-religious data.
- 84% of students accepted the filtration for the Anti-cultural related data while only 16 % of students not accepted the filtration of anti-cultural data.
- 83% of students accepted the filtration for the Sexual related data while only 17 % of students not accepted the filtration of sexual data.
- 75% of students accepted the filtration for the advertisement or Commercial announcements related data while only 25 % of students not accepted the filtration of the advertisement or Commercial announcements related data.

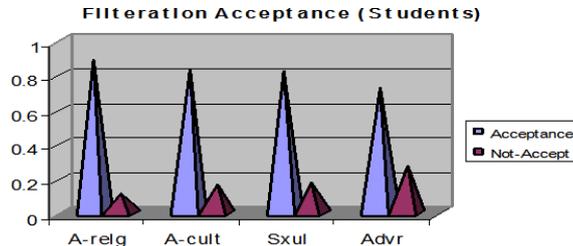


Fig. 4: Filtration Acceptance Histogram (Students).

Figure (5) shows the internet users (non-students) acceptance to do filtration for harmful data. Figure (5) is a histogram representation for filtration acceptance. It shows that:

- 52% of non-students accepted the filtration for the Anti-religious related data and 48 % of non-students not accepted the filtration of anti-religious data.
- 51% of non-students accepted the filtration for the Anti-cultural related data and 49 % of non-students not accepted the filtration of anti-cultural data.
- 92% of non-students accepted the filtration for the Sexual related data and only 8 % of non-students not accepted the filtration of sexual data.
- 50% of non-students accepted the filtration for the advertisement or Commercial announcements related data and 50 % of non-students not accepted the filtration of advertisement or Commercial announcements related data..

Analysis of Survey Results:

To get deep understanding for the survey results; we have to analyze these results and find some indications that can help in ranking the anti-ethical and anti-social harmful data factors according to their harmfulness on the internet users in our selected society. Figures (1-5) give a good idea about these harmful factors. Figure (1) shows that:

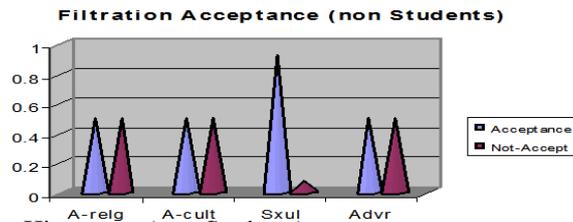


Fig. 5: Filtration Acceptance Histogram (non-Students).

- The sexual related data is the highest harmful factor for internet users. Since 74% of total users (74% of students and 72% of non-students) consider it as harmful data for them.
- The Anti-religious related data is the second highest harmful factor for internet users. Since 52% of total users (54% of students and 36% of non-students) consider it as harmful data for them.
- The Advertisements and commercial announcement related data is the third harmful factor for internet users. Since 43% of total users (40% of students and 59% of non-students) consider it as harmful data for them.
- The Anti-Culture related data is the fourth harmful factor for internet users. Since 20% of total users (18% of students and 30% of non-students) consider it as harmful data for them.

Figure (1) result shows that all of these data factors are harmful and unwanted by most or some of the users. This means that there is a need to focus on these factors and find the most suitable techniques and tools to do filtration for such harmful data. The difference in the percentage between students and non-student and between these harmful factors gives an indication that the filtration tool should be intelligent and consider the user, data society, and organization characteristics in doing filtration.

The ways of getting harmful data is a second complementary part to see the whole picture about harmful data. Figure (2) shows that:

- The e-mail is the first highest way to get harmful data for internet users. Since 75% of total users (75% of students and 72% of non-students) consider it as a way for getting harmful data.
- Accidentally is the second highest way to get harmful data for Internet users. Since 51% of total users (53% of students and 45% of non-students) consider it as a way for getting harmful data.
- The users searching for harmful data is the lowest way to get harmful data for users. Since only 13% of total users (12% of students and 22% of non-students) consider it as a way for getting harmful data.

This shows that e-mail and accidentally are the most popular ways in getting a harmful data. So we need to focus the filtration on these two ways without ignoring the others.

The third complementary part on harmful data is to determine the Internet's users view regarding doing filtration of such data. The survey result in Figure (3) shows that most of internet users like to have filtration for the harmful data:

- The highest acceptance for harmful data filtration is for anti-religious 85%.
- The second highest acceptance for harmful data filtration is for sexual related 84%.
- The third highest acceptance for harmful data filtration is for anti-culture 80%.
- The fourth level of acceptance for harmful data filtration is for advertisements 71%.
- The survey result shows that the percentage of refusing filtration for all the above factors is less than accepting filtration. This means that most of the internet users require filtration for the harmful data although some of them not highly consider some of the above factors as harmful data.

Since students are one of the essential factors in education process; so we have to focus on studying the affect of such harmful data on students then showing students acceptance to do filtration of such data. The survey result in Figure (4) shows that most of internet users (students) like to have filtration for the harmful data:

- The highest acceptance for harmful data filtration is for anti-religious 90%.
- The second highest acceptance for harmful data filtration is for anti-culture related 84%.
- The third highest acceptance for harmful data filtration is for sexual related 83%.
- The fourth level of acceptance for harmful data filtration is for advertisements 75%.

The survey result shows that the percentage of refusing filtration for all the above factors is less than accepting filtration. This means that most of the Internet users (students) require filtration for the harmful data.

The non-student is the other factor in the education process; so have to determine their view regarding filtration of harmful data. The survey result in Figure (5) shows that most of internet users like to have filtration for the harmful data:

- The highest acceptance for harmful data filtration is for sexual related 92%.
- The second highest acceptance for harmful data filtration is for anti-religious 52%.
- The third highest acceptance for harmful data filtration is for anti-culture related 51%.
- The fourth level of acceptance for harmful data filtration is for advertisements 51%.

The total survey result shows that the percentage of refusing filtration for all the above factors is less than accepting filtration. This means that most of the internet users (students or non-students) require filtration for the anti-ethical and anti-social harmful data. To do such filtration, there is a need to an intelligent tool that can do filtration of data considering the internet users, society, and organization ethical and social values. The main concept and design for filtration tool is described in the following paragraph.

Smart Data Filtration Tool (SDF):

To eliminate the effect of anti-ethical and anti-social harmful data factors, there is a need to develop an smart data filtration tool (SDF), which accepts different forms (text, graphics, audio, and video) of input data and filter it from any harmful data. This filtration is done according to religious, ethical, cultural, or social values and concerns for the user and environment or the society. This SDF tool can be installed in servers to support firewall or in any PC to do filtration for the data. SDF consists of sets of modules, which includes:

- Classification engine: This module is used to classify the users, organization, society and data according to its characteristics that extracts from its associated information.
- Filtration engine: This module is used to filter the classified data depending on extracted rules and regulation. This engine uses the intelligent technique(s) in filtration.
- Intelligent techniques: This module uses set of intelligent techniques (such as Genetic Algorithm Swarm techniques, heuristic,..) to support intelligent selection and filtration depending on characteristics and rules.
- Filtration techniques: set of techniques used to filter different forms of data according to ethical, social and religious rules.
- Extract Characteristics: extract user, organization, society and data characteristics.
- Extract rules and regulations: set of rules govern the work related to user organization society ethical, religious and social values.
- Information modules: is to collect information related to the users, the input data, organization and society.

The following figure (6) shows the main architecture of the SDF tool.

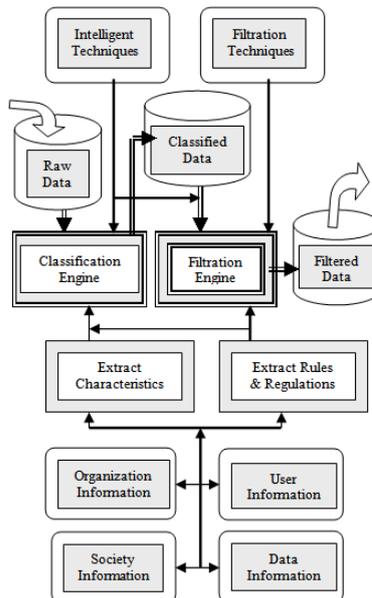


Fig. 6: Main Architecture of SDF tool.

Conclusion:

The new enhancement in Internet, mobility, database and Multimedia become important tools and facilities to support and improve the education process specially the higher education. Although the Internet has useful and powerful characteristics; but it still has some drawbacks and harmful impacts on users especially students, lecturers and researchers. This paper is analytical study for sample of internet users in different institutes and

universities. It focuses on studying the harmful data factors that affect the moral and social aspects of internet users, the ways of getting such harmful data, and the user's view to do filtration for such harmful data.

The survey result shows that sexual, anti-religious, advertisements and anti-cultural are the most unwanted harmful data factors for the internet users. E-mails and accidentally are the main ways to get such harmful data. A high percentage or most of the Internet users accept the concept of filtration for such harmful data. To do such filtration there is a need to develop an efficient and effective Smart Data Filtration (SDF) tool. This tool can be considered as a complementary part with current firewall functions. This SDF tool shall have the ability to filter multimedia data according to a predetermined rules and regulations related to religious, ethical, cultural, and social concerns for the environment or society of the users. This tool will lead to improve the internet usage especially in education industry and increase its performance.

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