A PROPOSAL FOR A PREVENTIVE PROGRAM FOR RISKS ASSOCIATED WITH THE USE OF THE INTERNET AND ITS IMPACT UPON STUDENTS' AWARENESS OF PERVERSE ISSUES

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ABSTRACT

The current study attempts to develop a preventive program to fend off the risks of using the internet by trying to test the effectiveness of raising students' awareness on various new technology-related issues. In order to achieve this goal, descriptive, analytical, and experimental approaches have been utilized. The program has been applied to a sample of intermediate and high school students in the cities of Jeddah, Al-Qassim and Riyadh before and after the experiment to gain more insight into the effectiveness of the designed program. A special measure of the level of students' awareness has been established. As shown in the findings, the program has proved to be highly effective in raising the awareness of intermediate and high school students about the problems and risks of misusing the internet. In particular, results show a statistically significant difference in the mean of students' awareness between the experimental and control groups in favor of the experimental groups. The students' responsiveness to the awareness scale has shown no statistically significant differences between the two groups with regard to gender, but with the students of Jeddah and Riyadh showing a higher level of risk than those of Al-Qassim. Based on these findings, the researchers recommend the use of information technology to create communication networks across the Kingdom of Saudi Arabia to exchange knowledge and experience in a risk-free internet environment, passing on such knowledge and experience to students through school curricula, special programs , or its incorporation into a computer course.

Keywords: Internet, Risk, Preventive Program, Student Awareness.

INTRODUCTION

The world has been witnessing technological strides, the most prominent of which is the internet, which gives access to information, teaching methods, education, exchange of expertise, and recreation through sites, e-mails, data bases, news, e-magazines, etc. However, the drawbacks of the internet may exceed its merits. One of the observed drawbacks is its misuses, as can be seen in pornographic material, lewd stories and videos, slander and libel, bickering, cultural subordination, devious thinking and beliefs, fraud, impersonation, piracy, blackmail, infiltrations, espionage, spreading the terror culture amongst the youth, and concealing a user's identity.

Due to the emergence of various factors that have rendered the internet a pressing requirement in schooling, housekeeping, or collecting information on a given subject, on the one hand, and spiraling internet abuse, on the other, it has become a necessity for parents and educators to protect the young with care and guidance especially at the earlier stages of their life so as to create the necessary awareness for them to fend off perils to their future life.

However, it is impractical to produce guidance and counseling programs for students after they have been exposed to internet dangers. Similarly, it is illogical to tackle deviation problems after our youth have already gotten involved in them. This makes it imperative to put forward preemptive strategies for internet uses on ethical, intellectual, religious, and security grounds in order to pinpoint internet-related dangers, and propose a preventive program to raise internet users' awareness about the risks of that usage to individuals and society alike.

A look at the literature reveals that this topic has not been dealt with adequately. Thus, establishing an educational

program to protect students from the dangers of the internet and deal with information they access on the web, be that to exploit them or to disseminate amongst them corrupt thoughts serving the goals of maverick groups or spread the culture of licentiousness and profligacy on the web, is of utmost importance. The current research offers to introduce an educational program for intermediate and secondary stages both to warn against the risks of the internet, and raise their awareness about some devious problems associated with internet abuse.

Stressing the importance of the role of internet in modern societies and the potentials it offers to bring about societal renaissance especially in information awareness field, the Kingdom of Saudi Arabia has made every effort to introduce the internet as a modern service into society, taking into consideration the enactment of regulations to use it. Furthermore, officials of the Ministry of Education have tried to spread the IT culture since in the middle of the last decade, incorporating three computer courses in advanced secondary education. Afterwards, some themes on IT and its applications have been included into reading syllabi for the intermediate stage. After cancelling the advanced system, the computer course has been kept in the amended secondary system as a main subject once a week only.

This study offers a preventive program for intermediate and secondary school students against the risks of the internet. It also tries to test the effectiveness of developing students' awareness of the various problems originating in internet abuse. The objectives of the research include:

- Determining general education students' various usages of the internet.
- Putting forward effective preventive measures to avert the dangers of the internet for general education students.
- Determining the level of awareness of some devious internet-related problems.
- Designing a preventive program against the dangers of internet misuse for middle and secondary students in conformity with students' needs and attitudes.
- Assessing the effectiveness of the proposed program in raising students' awareness about some devious problems, and determining the non-Islamic values related to students' use of the internet.

Suggesting a suitable mechanism to make use of the results and recommendations, the current research has the following merits:

- Determining the internet needs of intermediate and secondary school students will be fruitful in designing educational programs and courses, and in modifying the school curricula in light of these uses. It will also help course designers, educational demonstrators, supervisors, teachers, and specialists in educational technology and distance learning to revise their services to boost some positive uses of the internet.
- Helping course designers introduce some preventive techniques into computer courses, developing special programs to ward off internet risks, and establishing some educational units to protect students from internet abuse.
- Assisting parents and educational institutions such as schools and colleges to tackle internet misuse and raise students' awareness on some deviation problems through planning educational and preventive programs.
- Planning a preventive program against internet risks may be a first step towards preparing similar programs for students at different educational stages. It can also be a model for other programs based on educational packages and modules, and can be employed to design CD-based multimedia programs which are then uploaded to the educational websites.
- Measuring awareness of deviation problems may help parents, teachers, and even users of awareness level evaluation to raise the students' awareness and shun pornographic and destructive sites.
- Proving the effectiveness of the proposed program can make parents and educational experts trust the program as it improves students' internet usage and helps them to keep off the internet risks.

The current paper is structured as follows. The first section offers an overview of the methodological issues of the

paper. The second section reviews some of the literature on Internet uses and misuses. The third section addresses Internet misuses and subsequent physical growth hazards. The fourth section deals with the findings and results of the paper. And the last section is devoted to a discussion of the findings.

Materials and Methods

Research problem

The research problem can be couched in the following questions:

- What is the level of the general education students awareness of some deviation problems?
- What is the suggested outline of the proposed preventive program planned to help middle and secondary students ward off internet dangers?
- What is the effectiveness of this proposed program in raising the awareness of middle and secondary students about some deviation problem in Kingdom of Saudi Arabia ?

Research Hypotheses

- The proposed preventive program (PPP) designed to fend off the risks of internet misuse has a suitable degree of effectiveness in developing awareness of some deviation problems amongst intermediate school students of both sexes. This is apparently manifested in the dimensions of the measure en bloc and individually, for the three cities namely Jeddah, Riyadh and Al-Qassim, similarly, en masse and separately.
- The PPP planned to ward off the dangers of internet misuse which has a suitable degree of effectiveness in boosting awareness of some deviation cases amongst secondary stage students of both sexes. This is obviously illustrated in the dimensions of the measure en bloc and individually, in the three cities namely Jeddah, Riyadh and Al-Qassim, similarly, en masse and separately.
- There is no statistically significant difference between the means of male and female students' rate in the experimental group and those of the control group one in awareness measure of some deviation problems stemming from the middle stage students' internet misuse, during the dimensional application of the measure.
- There is no statistically significant difference between the means of male and female students' rate in the experimental group and those of the control one in awareness rate of some deviation conundrums arising from secondary stage students' misuse of the internet, during the dimensional application of the measure.
- There is no statistically significant difference between the means of students' rate in the experimental group and those of the control one in the awareness measure of some deviation problems emanating from middle stage students' internet misuse, during the dimensional application of the measure in gender dimension (male/female) and in district one (Jeddah, Riyadh and Al-Qassim).
- There is no statistically significant difference between the means of students' rate in the experimental group and those of the control one in the awareness measure of some deviation problems stemming from secondary stage students' internet abuse, during the dimensional application of the measure at the gender level (male/female) and district one (Jeddah, Riyadh and Al-Qassim).

Experimental design

The current paper attempts to determine the intermediate students' awareness level about internet abuse hazards as couched in the first question the study is raising. Thus, it is necessary to build a measure of awareness about internet misuse, to apply this measure to a population of middle students of both sexes in order to pinpoint their awareness level on internet relevant issues, and help to plan the PPP by establishing its objectives, subject matter, methodologies, and concomitant dangers of internet misuse, as well as scientific remedial methods based on exploring the reality and errors arising from real life. This can be detailed as follows:

The Application of Awareness Level of Deviation Issues

The awareness level of some deviation questions concomitant with internet misuse was pre-applied to research groups in order to determine the awareness level

over these issues and pinpoint the extent to which the two groups may be identical. Findings were as follows:

Developing a Proposed Preventive Program against the Hazards of Internet Abuse

There is a set of procedures adopted in planning the suggested preemptive program against the dangers of internet misuse for general education students of both sexes in intermediate and secondary stages of education in order to answer the second question of the current study. The program deals in self-learning underlying educational attitudes that mark the second half of the twentieth century. These steps can be conceptualized as follows:

- Recognizing the theoretical literature that tackles the theme under investigation in order to realize the outline of the proposed program.
- Pinpointing the goals beyond creating the program: The program aims at staving off the dangers of internet abuse among general education students as well as developing their awareness regarding some deviation conundrums concomitant with internet misuse.
- Reviewing results of previous studies so as to get acquainted with middle and secondary students' most important internet uses and the achieved feedbacks from these uses. Moreover, it helps determine the most widespread hazards they may be exposed to.
- Designating the general foundations of the program:
  - (i) Taking into consideration the inclusiveness and integration of all sides of the experiment.
  - (ii) Taking into account the role that this proposed program can fulfill in developing awareness on the hazards of internet misuse.
  - (iii) Guiding students soundly through correct channels.
  - (iv) The program derives its themes from the scientific background of the internet and the variables taking place in our contemporary world.
- Outlining the Specific Foundations of the Program: These bases are determined through the theoretical study resting on the individuality of education and self-learning. This study yielded the final form of the program. The program encompasses four educational packages and ten modules. The first educational package is entitled as an Approach to Internet Usage; the second educational package is labeled Internet Abuse Hazards; the third title is Internet Crimes; whereas the fourth is entitled as Internet in the Kingdom of Saudi Arabia.

Building Study Tool (Awareness Measure)

The Internet measure is composed of five pivots: (i) attitude about the hazards of internet use, which is spelled out in nineteen articles; (ii) religious, political, and personal hazards, which includes four clauses; (iii) infiltrations, sites ruining and virus reception, which encompasses seventeen articles; (iv) financial risks, including three articles; and (v) pursuit of licentious and prohibited sites, which embraces seven clauses.

The initial measure was submitted to a group of juries, who introduced some changes, making (i) include ten articles instead of nineteen, (ii) twelve articles instead of seventeen, and (ii) five instead of seven articles. To test the validity of the measure and its ability to gauge what it is designed for, the following has been carried out:

- *Jury Validity:* The measure was extended to five university professors in an attempt to profit by their viewpoints in connection with the extent of clarity of the targeted measure domain, the ad hoc measure dimensions, and the extent of clarity of phrasing as well as the extent of correlation between dimension and measure domain. In analyzing their opinions, some phrases were ruled out while others were reformulated. Moreover, measure dimensions were reformulated, too. This is shown clearly in the following Table 1.
- *Phrasing Validity:* To statistically test the validity of phrases, a correlation coefficient was calculated for each phrase by the total degree of the dimension to which it belongs void of phrase degree. The findings indicate that the terms of the measure are characterized by a feasible degree of validity.

Pivots	Stage	1st pivot	2nd pivot	3rd pivot	4th & 5th pivots	The whole measure
Stability	Intermediate	0.75	0.48	0.52	0.79	0.72
	Secondary	0.56	0.60	0.82	0.90	0.66

Table 1. Stability of awareness measure on internet hazards

- *Emphatic Coefficient Validity:* to ensure the validity of the measure en masse, it is calculated by the statistical program called LISREL.

Data collection method

As the current paper intends to determine middle students' awareness level on some deviation problems pertinent to internet abuse in a way that helps to plan a suggested program in terms of its objectives and content, a sample of middle stage students of both sexes was selected from three cities (namely Riyadh, Al-Qassim and Jeddah). The population was divided in every stage into two groups: an experimental group and a control one.

Sampling was random from intermediate and secondary students of both sexes in Kingdom of Saudi Arabia in three cities, namely Jeddah, Al-Qassim and Riyadh. The total number of the population is 1065 male and female students. The experimental group includes 639 students of both sexes, while the control one represents 426 male and female students. The student sample in the experimental group in the intermediate stage is 254 students and that of the experimental group in the secondary stage is 301 students, whereas the control group is 234 male and female students. The researcher controlled the variables related to sex, age, economic and social levels.

Data on feedback on the program is also collected through a questionnaire. On reviewing the literature, a list of subjects, aims, and sources of learning are determined, which are extended to supervisors, teachers and parents who expressed their satisfaction with its contents, proposing some recommendations.

Data analysis method

The paper uses the descriptive analytical method in surveying general education students' browsing the web. It also examines the most widespread risks on the web and the suitable preventive ways to stave them off. Furthermore, it is employed in developing the proposed preventive program from previous literatures.

The empirical method is used during sample selection from intermediate and secondary stage students of both sexes (because the computer course is set for these two stages). It is also utilized in the pre-test of the awareness measure to research two groups on deviation problems. In addition, it is implemented in the application of the proposed program on the experimental group while the control one is not exposed to the program. It is also employed in the pre-treatment phase so as to determine the statistical differences in pre-treatment and post-treatment between the two groups.

Review of the Literature

There are a lot of studies that have tackled the various aspects of the issues dicussed in the current study. These sides can be discussed into four approaches: students' motivations and needs in using the internet, risks of using the internet, planning programs and courses through the internet, and discussing internet awareness and attitudes towards using it.

Abdul Salam (1998) addressed the motivations behind using the internet, indicating that gathering information constitutes about 72.07% of internet usage, amusement 47%, making friends 47%, curiosity 25.5%, and killing time 6%. The study maintained that there is no statistically significant difference between the males and the females in this respect.

On the other hand, Charp (2000) reported that the United Nations educational, Scientific and Cultural Organization (UNESCO) indicated that the effectiveness of the internet is in the learning process as it affects student motivation toward self-learning and improves his/her communication skills as well (pp. 12-14). Al-Zahrani (2002) stressed the necessity of using the internet in Saudi general education, colleges, and university institutions. The study focused on the motivation behind internet uses, and summarized them up to include data collection, amusement, establishing social relationships, and communicating via e-mails. Some studies emphasized that using the internet can enhance excitement and develop innovation and creativity.

Apart from studies on students' motivations and needs in using the internet, there exist studies on the risks of using the internet. As the current study is concerned with raising students' awareness about internet risks, reviewing these dangers in the literature is a necessity. For instance, Takashi (1996) made it clear that the internet penetrates national

cultures and languages, and nations that want to join the global scientific and cultural system should use European languages especially English. Likewise, Taleeb (2000) referred to the retreat of Arabic in favor of English on the internet, indicating that the internet has occasioned tremendous social changes. Alsoufy (2004) confirms the idea that using the internet negatively affects an individual's culture, behavior, language, and even his/her physical and psychological health due to pornographic sites. Apparently, there is a need to emphasize the importance of effective filtering software which is a major theme of the current study.

The basic studies on students' motivations and needs in using the internet and the risks of using the internet are users-oriented. However, there are also Internet-based programs and courses. There exist several studies dealing with the design of internet-based programs and courses. For instance, Sanders and Morrison (2001) assure that learning through WebCT (Web Course Tools) is constructive in general, has a great influence on student performance and develops solving program skills, whereas Larry (2002) presents some aspects that should be ensured in an e-learning course. These aspects include designing the program, student support, guidance, communication between teacher and student, displaying, and completing the course. Milheim (2004) made it clear that the students who lose self-learning skills will not achieve progress in e-learning courses but those who have self-learning skills will enjoy working because they can organize their time.

Another category of Internet-related research has to do with measuring the awareness of Internet uses. As the current study is concerned with creating awareness of some deviation problems, it is a necessity to find out similar measures. Many researchers are interested in students' attitudes and needs. For instance, Ford & Miller (1997) indicate that males indulge more in using the internet than females. Tsai , Lin & Tsai (2001) perceived the measure of using the internet as usefulness, affection, perceived control and behavior. Their results indicated that there are no significant differences between males and females but male students show more confidence in using the internet. Sidhu (2002) shows that about 86% of students have positive attitudes towards using the internet, and recommends activating it in both learning and teaching processes.

The current study lays emphasis on the hypothesis that using the internet has many disadvantages, while concentrating on students' awareness of the internet risks. It also corroborates the care given to students' attitudes because awareness is one of the attitudes so that there is a need to use similar studies as a guide for the awareness measure. However, it differs from other studies in that it takes advantage of these dangers to create a preventive program to raise students' awareness. It also shares concern with previous studies about planning this preventive program based on the individuality of learning through educational modules as a new technique in self-learning, assessing its effectiveness on male and female students.

Internet Misuses and Subsequent Physical Growth Hazards

The growth hazards of the Internet can be schematized into two parts: Concomitant Internet Misuse Disorders and Protection against Internet Hazards.

Part One: Concomitant Internet Misuse Disorders

Internet Misuses and Posterior Physiological Growth Disorders

When adolescents spend long hours chatting and browsing licentious sites, they eventually fall prey to what is known as the pornographic addiction phenomenon. They become addicts of dissolute materials like drug or alcoholic addicts, which results in depleting their active potentialities, squandering their money, and wrecking their morals. It has been found out that there is a relation between youth addiction on profligate sites on the web and the ratio of crime among youth.

Internet Abuses and Subsequent Mental Effects

Internet misuse has a bad effect on the mental growth of an individual, who is likely to be exposed to knowledge that runs contrary to his/her beliefs and culture, which may lead to embracing inappropriate thoughts. Moreover, hasty and sudden exposure to western culture and knowledge available on the net, can contribute to affecting local culture and giving rise to alienation of individuals, thus

dissociating them from their national history and heritage.

Internet Misuses and Consequent Social Growth Problems

The spread of Internet has affected students' social growth in adolescence since a lot of them indulge in communicating with their foreign or local counterparts, and reciprocating notions and ideas via chat forums, e-groups and other audio-video multimedia. This may lead to teens isolation from their family and social environment, thus causing flaws in their character like introversion and solitude. Later on, they may refuse to talk to anybody or participate in different life activities.

Internet Abuse and Ensuing Psychological and Emotional Growth Disorders

Internet abuse can embolden adolescents to be addicted to alcoholic drinks, drugs, smoking, use of dangerous stuff, and knowledge of how to make explosives and bombs. Spending long hours on the net makes them subject to receiving unsuitable, troubling, and scary messages and to channeling their capabilities.

Part Two: Protection against Internet Hazards

Raising Awareness about Internet Culture

Internet can be best optimized as a browser to explore what is new and modern. Culturally-tainted educational sites can be established to guide teens to raise their awareness on positive and negative issues about internet usage as well as to raise educators' awareness on adolescents' psychological characteristics, needs, tendencies and problems, and the correlation between these traits and internet positive usage. Fruitful discussion and guidance programs on the negative and positive internet uses, should also be supported.

Enacting Controls and Precautions for Internet Use

The State should block maverick sites that disseminate taboo sexual stuff and subversive ideas. Internet protection and safety rules should be adopted such as light, safe monitor specifications, safe chair, and healthy posture. Parents and educators should position computer in places where they can censor the sites adolescents may not visit, set specific times for internet connection, and curb permissible length, quantity, and quality of browsing the different sites on the web.

Development of Self-deterrent when Using the Internet

Stressing that shyness from and fear of God should outdo the fear of humans, adolescents should be addressed with proper guidance and counseling as well as trained to check on their own behaviors with regard to God's obedience, and to steer clear of risks. They should be bound by a set of rules regulating internet usage indoors and outdoors so as to help keep a close eye on them. At the same time, useful information and services on the web must be underlined along with the perils that have a bad bearing on morals, customs, and traditions. Moreover, censorship programs should be used to follow up on teens' activities on the internet.

Making Best Use of Adolescents' Leisure Time

Teens should take part in working on the web to teach them to well optimize it, and to tackle any problem they may encounter while browsing the web. They must be occupied by serious issues and must be engaged in thinking about and putting forward solutions for themselves.

Laying out the Initial Outline of the Program

Four main educational packages for the program have been established in light of the terms and foundations determined before. Then, they were presented to a group of juries to express their viewpoints on the program.

Preparing the Program in its Final Form

After being transformed into educational modules, the packages have been extended to a group of juries to approve them. The program was modified in accordance with the juries' perspectives to secure validity, and was applied to a preliminary sample of students to make sure that the program and its linguistic phrasing suit their characteristics. The program is made up of four educational packages and twelve modules along with items and entries that can be rendered into an educational subject matter that goes in harmony with the attainment level of middle and secondary students.

Research Results

The aim of the current study is to determine the extent to which the proposed preventive program is effective in staving off the risks of internet abuse, and its role in developing the awareness of general education students

of both sexes concerning deviation conundrums. To achieve these goals, the researcher carried out the following steps:

- An awareness measure was pre-applied to research groups in order to achieve the proportion and consistency (uniformity) of data distribution.
- The proposed program was applied to the main research sample to determine the extent to which the program is effective in developing awareness on some deviation problems using Black's effectiveness assessment equation. The application also aimed at examining statistical differences between the experimental group and the control one after carrying out the experiment in order to identify the impact of the proposed program on experimental groups relying on the nonconformity between the two groups before administering the experiment.

The pre-test indicates that there is a statistically significant difference between the means of male and female students' values in the experimental group and those of the control group in terms of measure of awareness on some deviation problems related to middle stage students' internet misuse during the dimensional application of the measure in research relevant variables, save the second dimension (religious, political and personal risks). The t-value amounted to 1.42, which is not statistically significant due to internet use in houses and schools, differences in students' attitudes towards using the internet in general, dissimilarity in tackling hackings, site sabotage and sending and receiving viruses, discrepancy in financial dealings, and divergence in understanding hazards of exploring prohibited licentious sites. This suggests that religious, political, and personal risks were not statistically significant owing to students' correlation with a general backdrop, which points to the importance of establishing the proposed program, and applying it to middle stage students as a means to overcome their low awareness level.

The pre-test suggests that there is a statistically significant difference between the means of male and female students' values in the experimental group and those of the control group in the measure of awareness on some deviation problems concerning secondary stage students' internet misuse during the dimensional application of the measure. The statistical significant differences between the experimental and control groups seem to be manifest in the first, third, fifth dimensions and the total of secondary school students of both sexes. This is due to similarities amongst secondary students in dealing with values related to financial, religious, political and personal hazards, which battles for the significance of planning the proposed program and applying it to secondary school students in the experimental group as a means to tackle their low awareness level as compared to that of the control group.

In terms of how the findings of the research correlate with the research hypotheses, the following can be stated:

Hypothesis 1

Accepting the first hypothesis, which states that the proposed preventive program designed to fend off the internet abuse hazards is characterized by a suitable degree of efficacy in developing the awareness of intermediate stage students of both sexes on some deviation problems in the dimensions of measure units in solo and en masse for the three cities of Jeddah, Al-Qassim and Riyadh, separately and en bloc. The findings are shown in the Table 1.

Hypothesis 2

Accepting the second hypothesis which states that the proposed preventive program planned to ward off the internet abuse hazards must be characterized by a

City		Jeddah		Qassim		Riyadh		All	
Pivots	Sex	Black - formula	effective ness	Black - formula	effective ness	Black - formula	effective ness	Black - formula	effective ness
Pivot 1 (28)	male	1.09	056	1.30	0.57	1.10	0.57	1.11	0.57
	female	1.16	0.61	1.28	0.67	127	0.66	1.24	0.65
Pivot 2 (16)	male	1.27	0.66	1.28	0.66	1.41	0.71	1.33	0.69
	female	1.25	0.66	1.30	0.68	1.40	0.73	1.32	0.69
Pivot 3 (48)	male	1.50	0.79	1.57	0.82	1.63	0.85	1.56	0.82
	female	1.54	0.82	1.58	0.82	1.27	0.56	1.54	0.81
Pivot 4 (12)	male	1.46	0.80	1.58	0.83	1.69	0.90	1.57	0.84
	female	1.6	0.86	1.40	0.76	1.78	0.93	1.58	0.85
Pivot 5 (16)	male	1.48	0.77	1.43	0.76	1.73	0.90	1.60	0.85
	female	1.59	0.89	1.52	0.82	1.78	0.97	1.63	0.89
Total (120)	male	1.37	0.72	1.42	0.82	1.59	0.87	1.45	0.76
	female	1.42	0.76	1.45	0.76	1.49	0.78	1.46	0.77

Table 1. Effectiveness of the proposed program in developing the awareness of the secondary school students in the experimental group on some deviation problems

suitable degree of efficacy in developing the awareness of secondary school students of both sexes on some deviation problems in the dimensions of measure units in solo and en masse for the three cities of Jeddah, Al-Qassim and Riyadh, separately and en bloc. The findings are shown in the Table 2.

Hypothesis 3

Rejecting the third nil assumption, which stipulates that there is no statistically significant difference between the means of male and female students' values in the experimental group and those of the control group in the awareness measure on some deviation problems concerning middle stage students' internet misuse during the dimensional application of the measure. Results were in favor of the experimental group, which is in conformity with the literature that enhanced the importance of planning preventive programs against internet risks with a great bearing on students' performance as has already been achieved in this study. The findings are shown in the Table 3.

Hypothesis 4

Rejecting the fourth nil hypothesis that states that there is no statistically significant difference between the means of male and female students' marks in the experimental group, and those of the control group in the awareness value on some deviation problems concerning secondary stage students' internet misuse during the dimensional application of the measure. There are statistically

City		Jeddah		Qassim		Riyadh		All	
Pivots	Sex	Black-formula	effectiveness	Black-formula	Pivots	Sex	Black-formula	effectiveness	Black-formula
Pivot1	male	1.18	0.62	1.2	0.63	1.26	0.65	1.21	0.63
(28)	female	1.2	0.62	1.32	0.69	1.26	0.71	1.29	0.67
Pivot2	male	1.3	0.68	1.25	0.65	1.34	0.69	1.31	0.68
(16)	female	1.3	0.66	1.46	0.76	1.27	0.64	1.36	0.71
Pivot3	male	1.56	0.81	1.43	0.74	0.97	0.50	1.32	0.68
(48)	female	1.52	0.79	1.65	0.85	1.71	0.88	1.63	0.84
Pivot4	male	1.67	0.88	1.48	0.78	1.16	0.62	1.44	0.76
(12)	female	1.61	0.86	1.59	0.85	1.80	0.95	1.65	0.87
Pivot5	male	1.59	0.83	1.63	0.85	0.75	0.39	1.36	0.69
(16)	female	1.79	0.93	1.73	0.89	1.82	0.95	1.78	0.92
Total	male	1.43	0.74	1.27	0.71	1.10	0.57	1.29	0.67
(120)	female	1.44	0.75	1.52	0.79	1.59	0.83	1.52	0.79

Table 2. Effectiveness of the proposed program in developing the awareness of the secondary school students in the experimental group on some deviation problems

Source	Pivots	df	Sum of squares	ANOVA	F-Test	Eta
Pivot 1 (pre)	Pivot 1	1	6.405	6.405	0.667	0.003
	Pivot 2	1	634.	634.	0.188	0.001
	Pivot 3	1	4.932	4.932	0.192	0.001
	Pivot 4	1	0.06075	0.060	0.000	0.000
	Pivot 5	1	7.545	7.545	1.146	0.005
	Total	**1**	**44.591**	**44.59**	**0.575**	**0.003**
Pivot 3 (pre)	Pivot 1	1	2.257	2.257	0.235	0.001
	Pivot 2	1	4.373	4.373	1.300	0.006
	Pivot 3	1	34.012	34.01	1.325	0.006
	Pivot 4	1	782.	782.	0.187	0.001
	Pivot 5	1	1.244	1.244	0.189	0.001
	Total	**1**	**4.032**	**4.032**	**0.052**	**0.000**
Pivot 4 (pre)	Pivot 1	1	32.113	32.11	3.345	0.015
	Pivot 2	1	1.798	1.798	0.535	0.002
	Pivot 3	1	29.499	29.49	1.149	0.005
	Pivot 4	1	2.828	2.828	0.67	0.003
	Pivot 5	1	30.345	30.34	4.61	0.021
	Total	**1**	**385.312**	**385.3**	**4.97**	**0.022**
Pivot 4 (pre)	Pivot 1	1	33.316	33.31	3.47	0.016
	Pivot 2	1	9.429	9.429	2.80	0.013
	Pivot 3	1	31.017	31.01	1.20	0.005
	Pivot 4	1	4.017	4.017	0.95	0.004
	Pivot 5	1	329.	329.	0.05	0.000
	Total	**1**	**250.994**	**250.9**	**3.23**	**0.015**
Sum (pre)	Pivot 1	1	13.602	13.60	1.4	0.006
	Pivot 2	1	5.432	5.432	1.6	0.007
	Pivot 3	1	342.	342.	0.0	0.000
	Pivot 4	1	132.	132.	0.0	0.000
	Pivot 5	1	6.610	6.610	1.0	0.005
	Total	**1**	**90.982**	**90.98**	**1.1**	**0.005**
Groups	Pivot 1	1	21.072	21.07	2.195	0.010
	Pivot 2	1	0.0764	0.076	0.023	0.000
	Pivot 3	1	2650.4	2650.44	103.2 26**	0.319
	Pivot 4	1	77.8	77.801	18.558**	0.078
	Pivot 5	1	433.	433.41	65.846**	0.230
	Total	**1**	**5814.7**	**5814.75**	**75.000****	**0.254**
Error	Pivot 1	220	2111.977	9.600		
	Pivot 2	220	739.898 literature	3.363		
	Pivot 3	220	5648.762	25.67		
	Pivot 4	220	922.318	4.192		
	Pivot 5	220	1448.085	6.582		
	Total	**220**	**739.898**	**3.363**		

Table 3. Results of the statistical differences in awareness on some deviation problems by manipulating comparison analysis technique between the experimental and the control groups after administering the experiment to middle school male and female students

significant differences between the experimental and control groups amongst secondary stage students of both sexes in all research tool in solo, and the tools en masse in favor of the experimental group. This suggests the effectiveness of the proposed program in repelling the risks of internet misuse, and in asserting its role in raising the awareness of public education students of both sexes over some deviation problems. The findings are shown in the Table 4.

Hypothesis 5

Accepting the fifth nil hypothesis that states that there is no statistically significant difference between the means of

Source	Pivots	df	Sum of squares	ANOVA	Test	Eta
Pivot 1 (pre)	Pivot 1	1	2.037	2.037	0.074	0.000
	Pivot 2	1	3.238	3.238	0.579	0.002
	Pivot 3	1	68.25	68.25	1.235	0.005
	Pivot 4	1	188.	188.	0.056	0.000
	Pivot 5	1	11.66	11.66	2.841	0.011
	Total	**1**	**31.94**	**31.94**	**0.205**	**0.001**
Pivot 3 (pre)	Pivot 1	1	23.67	23.67	0.865	0.003
	Pivot 2	1	10.71	10.71	1.914	0.008
	Pivot 3	1	619.7	619.7	11.21	0.043
	Pivot 4	1	2.354	2.354	0.704	0.003
	Pivot 5	1	26.06	26.06	6.349	0.025
	Total	**1**	**868.0**	**868.0**	**5.568**	**0.022**
Pivot 4 (pre)	Pivot 1	1	117.7	117.7	4.304	0.017
	Pivot 2	1	616.	616.	0.110	0.000
	Pivot 3	1	674.1	674.1	12.20	0.047
	Pivot 4	1	13.054	13.054	3.902	0.015
	Pivot 5	1	166.	166.	0.041	0.000
	Total	**1**	**1664. 940**	1664.940	**10.68**	**0.041**
Total (pre)	Pivot 1	1	1.298	1.298	0.047	0.000
	Pivot 2	1	929.	929.	0.166	0.001
	Pivot 3	1	89.71 6	89.71 6	1.624	0.006
	Pivot 4	1	273.	273.	0.082	0.000
	Pivot 5	1	16.615	16.615	4.048	0.016
	Total	**1**	**64.337**	**64.337**	**0.413**	**0.002**
groups (pre)	Pivot 1	1	799.5 68	799.5 68	29.229**	0.105
	Pivot 2	1	14.60	14.60	2.609	0.010
	Pivot 3	1	4509.403	4509.40	81.612**	0.246
	Pivot 4	1	90.789	90.789	27.141**	0.098
	Pivot 5	1	33.590	33.590	8.184**	0.032
	Total	**1**	**13127.139**	**13127.139**	**84.2214****	**0.252**
Error	Pivot 1	250	6838.931	27.356		
	Pivot 2	250	1398.761	5.5954		
	Pivot 3	250	13813.481	55.254		
	Pivot 4	250	836.283	3.345		
	Pivot 5	250	1026.128	4.105		
	Total	**250**	**38969.736**	**155.879**		

Table 4. Results of the multiple tests to examine the statistical differences in awareness on some deviation problems by manipulating comparison analysis techniques between the experimental and the control groups after administering the experiment to secondary school male and female students

male and female students' values in the experimental group and those of the control group in the awareness measure of some deviation problems concerning middle stage students' internet misuse during the application of gender dimension (male/female), and rejecting the hypothesis concerning city variable (Jeddah, Al-Qassim and Riyadh). Jeddah male students were inclined to use the internet more dangerously than Al-Qassim males, where the mean of the former hit 84.748 and that of the latter amounted to 89.22. As for the interaction variable, Jeddah male students occupy the top of the list of dangerous internet users followed by Jeddah females, Al-Qassim males, and Al-Qassim females. The findings are shown in the Table 5.

Source	Pivots	df	Sum of squares	ANOVA	f	Eta
Total (pre)	Total (post)	1	3017.73	3017.73	28.554**	0.114
sex	Total (post)	1	331.632	331.632	3.138	0.014
city	Total (post)	1	966.433	966.433	9.145**	0.040
Sex-city	Total (post)	1	612.921	612.921	5.800*	0.025
Error	Total (post)	222	23461.94	105.684		

Table 5. Covariance employed to examine statistical differences amongst middle school students on internet abuse risks in terms of the variables of gender, city of origin, and interaction between them

Hypothesis 6

Accepting the validity of the third assumption which states "There is no statistically significant difference between the means of male and female students' marks in the experimental group and those of the control group in the awareness measure on some deviation problems originating from internet abuse by secondary school students, during the application of gender dimension (male/female) and district dimension (Jeddah, Al-Qassim and Riyadh) in the measure", the following Table 6 results have been obtained.

Conclusion and Recommendation

According to the study results, there are some recommendations that can help intermediate and secondary students avoid the dangers which they face through using the internet:

- Preparing intermediate and secondary students to use the internet safely by designing some preventive programs they have to be exposed to before they use the internet.
- Holding forums and establishing communication channels between teachers and students in order to make them utilize the advantages of internet technology in exchanging experiences over the internet in every district in Kingdom of Saudi Arabia.

Source	Pivots	df	Sum of squares	Anova	F-Test	Eta
Total (pre)	Total (post)	1	90.998	90.998	503.	0.002
Sex	Total (post)	1	25.925	25.925	1.414	0.006
City	Total (post)	2	5510.991	2755.496	15.221**	0.109
Sex-city	Total (post)	2	3843.857	1921.928	10.617**	0.079
Error	Total (post)	249	45076.441	181.03		

Table 6. Covariance employed to examine the statistical differences amongst secondary school students on risks of internet abuse in terms of the variables of gender, city of origin, and interaction between them

- Encouraging and preparing teachers to communicate with their students through e-mails and school e-pages providing that a great number of students have internet access at home, at school, or in cybercafés. This is to engage students in different educational activities and school assignments that stimulate them to browse scientific sites so as to obtain the information they lack and help them avoid pornographic site.
- Developing the culture of optimization of the internet in learning and teaching objectives.
- Giving students free access to some useful scientific, educational, and amusement sites, and helping them achieve their objectives and satisfy their needs.
- Using written educational modules or e-programs to raise students' awareness about the risks they may face while browsing the web, and constantly updating them.
- Giving due care to planning preventive programs for intermediate and secondary students, and teaching them either separately or incorporating them into computer courses. It is preferable for these programs to be taught in early adolescence before exposure to immoral values, which can be fulfilled by revising the philosophy underlying curricula and putting forth a strategy to avert the internet risks.
- Connecting educational curricula with internet services specially e-mails, chatrooms, video conferences, etc. This connection can be established through prompting students to browse the internet to do relevant school activities and learn school subjects such as history, geography, national culture, and languages.
- Giving due importance to developing middle and secondary students' critical thinking skills, and training them to evaluate web pages, discriminating between good and bad content.
- Raising middle and secondary students' awareness and instilling in them online ethics and safety measures in browsing the web.
- Displaying the measure of awareness on the Ministry of Instruction and Education website to determine the extent to which students are aware of internet risks along with developing some relevant measures and utilizing their results in fending off the problems which students face on the internet.
- Raising family awareness by encouraging parents to hold open discussions with their children, and use filtering software.

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