# The Impact of Employing Computers in E-Political Participation

## Dr: Hasan A. Ayed, Dr: Fares Fraij
## AL- Hussien Bin Talal University

## Introduction.

Today, humanity witnesses a cognitive revolution which has upset conventional standards and changed public life styles in general and academic life in particular. Nations are walking the path of scientific progress created by this revolution on one hand and the technological revolution on the other. Computers have become the backbone of every field, and those who use computers walk that path and those who do not stay behind and will have to pay a dear price.

As computers affect our life in general, through the internet, e-libraries, databases, e-learning or distance education, their impact is centered on our thought, feelings and attitudes towards different issues.

Due to the influential role of computers in higher education, Al-Hussein Bin Talal University (AHU) made computer courses a compulsory requirement for all students equally: in science, arts and engineering specializations, in order to link academic study with the computer — the basic tool and language of the age. Therefore, the topic of the present study was chosen: the impact of employing computers on e-political participation.

## Study Problem and Its Relevance.

The dominating, expanding and continuous trend in employing computers world wide has motivated decision makers in Jordan to adopt and integrate computers in the educational system, whether at school level or university and college levels. Consequently, plans for the present and the future have been established and modified in order to allow the inclusion of computer courses, and in order to use the computer as a learning tool. For instance, a high-speed and fiber-optics based network has been implemented in an effort to connect all educational institutions in Jordan including schools and universities. Computers also found their way to every school in Jordan. Broadband internet connection is available at reasonable price. Finally, the state-of-the-art e-learning applications such as EduWave are recently available at every school.

The study problem was to investigate the impact of using computers in e-political participation on the students of the Mass Media and Strategic Studies Department (MMSS) at AHU. The study acquires its importance from the fact that it is the first to deal with this topic, specifically applied to these students, and aims at helping decision-makers at the university to plan for the future.

**Study Objectives.**

The study's main goal is to explore and measure the impact of employing computers on the e-political participation of the students of MMSS at AHU.

**Study Question.**

The study attempts to answer the following question: What is the impact of employing computers on e-political participation?

**Study Assumptions.**

The study is based on four assumptions:

1. There are no statistically significant differences in students' attitudes related to the variable of academic year towards e- political participation at .05.

2. There are no statistically significant differences in students' attitudes related to the variable of computer courses towards e- political participation at .05.

3. There are no statistically significant differences in students' attitudes related to the variable of computer use towards e- political participation at .05.

4. There are no statistically significant differences in students' attitudes related to the variable of gender towards e-political participation at .05.

**Procedure Definitions.**

- E-political participation: It Mediums all activities, opinion expression, discussions and votes conducted via the internet.

- Computer use: All uses made of the computer itself or electronic communication for a certain number of hours.

- Gender: student's sex: male or female.

- Study years: It Mediums the student's level determined by the number of credit hours he/she has covered; these equal levels one, two, three and four.

- Computer courses: Computer Skills I and II which are studied by students at AHU.

**Former Studies.**

Arab and foreign studies have equally dealt with this topic, for it is of common interest to all researchers. Of such studies, we cite the following:

– Atif Ben Tarif's study [1] [2] investigated the impact of using the computer as a Medium of instruction on the achievement of the education college students in comparison with the traditional method and finally identifying students' attitudes towards using the computer. His findings showed significantly better results in the

**References:**

[2]Atef Omer Bin Tareef, 2007, "The Effect of Using the Computer in Teaching Statistics to Educational College Students on Their Achievement and Attitudes Towards the Computer" (Under Publication).

achievement of students taught through the computer than those who studied with a traditional method.

– Al-Shannag's study [1] aimed to investigate the effect of using Dry Lab strategy on science students' achievement, scientific attitudes, and acquiring science processes skills compared with the traditional method (Wet Lab). The study results revealed that there were statistically significant differences in achievement, scientific attitudes and acquiring these skills due to the teaching strategy. These differences were in favor of using the dry lab as a teaching strategy. The efficiency of using dry lab strategy was significant in all of the study dependent variables, achievement and attitudes.

– Kevin and Curran's [2] study examined how e-democracy can bring about a truer form of democracy. They concluded that two main things stand in the way: securing the voting process and representatives.

– Muhammad Theeban al-Ghzawi's and Dr. Ayed Hamdan al-Hirsh's study [3] examined the effect of the computer courses on the achievement of the Faculty of Education students. Their study focused on the following question: What are the students' attitudes towards using the computer in learning before they took the computer course and after taking it? The study population was 47 students. The study showed that students' attitudes were positive before and after taking the course; for 47 paragraphs got high rating (80 and above) and very high (81 and above). These paragraphs were about their willingness to use the computer, their realization of its relevance to their careers, in addition to its being a learning utility The study's main recommendation was the need for computer use in the teaching of different courses.

– Dr. Muhammad Abd al-Rahman Tawalbeh [4] (2000) discussed teaching via computers and its effect on post graduate students' attitudes towards educational computer applications. The following question was asked: What are the attitudes of M.A. students at the Faculty of Education and Arts/Yarmouk University towards educational computer applications? The study population was 38 students and the study showed that the average of the participants' use of educational computer applications was 1119.39 (74.54%) which was high. As for computer application as a teaching method, their response was positive, and very high (80.64%). The

[1] Qasim Alshannag and others, 2003, "The Effect of Using Computerized Multi Media System and Free Inquiries on Science Students' Learning at the University of Jordan," Amman: The Higher Council for Science and Technology.
[2] Kevin Curran and Eric Nichols, 2005, "E-Democracy," Journal of Social Sciences ICI: 16-18.
[3] Muhammad Theeban al-Ghzawi' and Dr. Ayed Hamdan al-Hirsh, 5 2003, The Effect of Computer Courses on the Achievement of the Faculty of Education Students at Yarmouk University and the Development of their tendencies towards using it", Futuristic Studies, vol. VII, January, pp 103-120.
[4] Dr. Muhammad Abd al-RahmanTawalbeh, 2000, Teaching Via Computers and Its Effect on Postgraduate Students' Attitudes Towards Educational Computer Applications", Futuristic Studies, No. 5, July.

recommendations of the study included the demand for similar studies at other universities in Jordan, and expanding the teaching of computer courses.

– Hassan A. Ayed [1] (2005) studied the effect of the internet on political knowledge. The study question was: What is the effect of the internet on the political knowledge of first- and second-level MMSS students?

The assumptions were that there is a statistically significant difference in the degree of the effect of the internet on political knowledge related to gender, age and income, and the conclusion reached was that there were no statistically significant differences related to gender, age or income. The level of significance was more than .05 which negates these assumptions; for the internet is an easy and accessible service provided by the university. The study also found that the internet helps students to acquire political knowledge by giving them the chance to freely express their opinions and obtain information from different sources.

## Study Population, Sample and Procedure.

The study population consists of 66 students (39 male and 27 female) studying at the MMSS at AHU in the second semester of the academic year 2006/2007. They are specialized in International Relations and Strategic Studies; with an age average of 21.8.

## Study Instrument.

Benefiting from previous studies in the field, the researchers prepared a questionnaire suitable for the purposes of the study. It consisted of 16 paragraphs covering all aspects of the subject. 11 paragraphs only were discussed and applied. The questions dealt with ratio analysis, T-Test, Likert Scale of 5 grades: very high (5 points), high (4 points), average (3 points), low (2 points) and very low (1 point).

## Instrument Validity.

To ensure the validity of the attitude grading and the paragraphs' clarity and coherence, the questionnaire was examined by five different arbiters: three arbiters from the MMSS, another one from the Department of Mathematics and Statistics, two from the Faculty of Educational Sciences and one specialized in social sciences. The arbiters agreed on most of the paragraphs that served the purposes of the study; the paragraphs they discredited were discarded.

The questionnaire was first tried on an experimental group to test its validity, coherence and verbal clarity. The group consisted of 32 students other than the study population. Then four days later the process was repeated to ensure its validity.

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[1]Hasan A. Ayed, 2005, "The Influence of Internet In the Political Culture (Field Study),"Journal of Social Science, I(3): 128-135.
7 http://www.jordan.jo
8 http://www.ahu.edu.jo/
9 http://www.springerlink.com/content/a149kn36176g1612/
10 http://www.itl.nist.gov/div898/handbook/eda/section3/eda353.htm

**Questionnaire Distribution.**

The questionnaire was distributed to the International Relations and Strategic Studies students, filled under and finally collected for analysis.

**Statistical Processing.**

The data in the questionnaire was entered in the computer, after which the SPSS band was applied for this purpose. The percentage ratio and repetition were applied to describe the sample's characteristics.

**Sample Characteristics.**

The limitations of this study are:

Time limit: The study was conducted in the first second semester of the academic year 2006/2007.

Location: The study was limited to the students of MMSS at AHU.

## Table 1. Demographic of the Sample

| Variables | Frequency | Percentage |
|---|---|---|
| Gender<br>Male<br>Female | <br>38<br>28 | <br>57.6<br>42.4 |
| Age (Average 21.8) | 52 | 78.8 |
| Less than 22<br>More than 23 | 14 | 21.2 |
| Income<br>Less than 150<br>More than 151 | <br>14<br>46 | <br>23.3<br>76.7 |
| Academic level<br>Second year<br>Third year<br>Fourth year | <br>2<br>50<br>14 | <br>3<br>75.8<br>21.2 |
| General average<br>Less than 70<br>More than 71 | <br>28<br>32 | <br>46.7<br>53.3 |

**Table 2. Population Characteristics According to the Frequency of Computer Use**

| Frequency of computer use | Frequency | Percentage |
|---|---|---|
| Daily | 20 | 30.3 |
| Every two days | 6 | 9.1 |
| Every three days | 16 | 24.2 |
| Every four days | 10 | 15.2 |
| Every more than five days | 14 | 21.2 |
| Total | 66 | 100 |

**Table 3. The Variables of Studying Computer Skills I and II**

| Variables | Frequency | Percentage |
|---|---|---|
| Studied Computer Skills I | 64 | 97 |
| Did not study Computer Skills I | 2 | 3 |
| Total | 66 | 100 |
| Studied | 42 | 63.6 |
| Computer Skills II | | |
| Did not study | 24 | 36.3 |

| Variables | Frequency | Percentage |
|---|---|---|
| Computer Skills II | | |
| Total | 66 | 100 |

**Table 4. Average of Amount of Time using the Computer**

| Hours/a day of computer use | Frequency | Percentage |
|---|---|---|
| 1 hr | 30 | 45.5 |
| 2-3 hrs | 34 | 51.5 |
| 4-5 hrs | 1 | 1.5 |
| 6-7 hrs | 1 | 1.5 |
| 8-9 hrs | 0 | 0 |
| Total | 66 | 100 |

**First:**

In order to test the first assumption that presumes "there are no statistically significant differences at p. 05 in students' attitudes towards e-political participation that can be attributed to the academic year variable," and in order to test the validity of this assumption the T-Test was applied to the relevant data, which revealed in table (5) a statistically significant difference related to the variable of academic years beginning from second year up to the fourth. The Medium .0.6667 The Stan. Dev. is 1.3660 and significance is 0.001 which results in the rejection of the above negative assumption, as can be discerned from the following table:

**Table 5. Difference Related to the Variable of Academic Years**

| Variables | Medium | Stan. | T-Test | F.D | significance |
|---|---|---|---|---|---|
| Academic years and e-political participation | 0.6667 | 1.3960 | 3,88 | 65 | 0,001 |

Referring to the percentage results in the table, one finds that the highest percentage is that of the third year with a ratio of 75.8%, followed by the fourth year with a ratio of 21.2%. See table (1). This indicates that progress in study years and in academic level is reflected positively on the tendency towards e-political participation. However, this participation is still below the required level; i.e., very low.

**Second:**

In order to test the second assumption which presumes that "there are no statistically significant differences attributed to studying computer courses in students' attitudes towards political participation at .05", the T-Test was applied. It is found that there are statistically significant differences attributed to the variable of studying Computer Skills courses, as illustrated in the following table:

**Table 6. Difference Related to the Variable of studying Computer Skills Courses**

| Variables | Medium | Stan. Dev. | T-Test | F.D | significance |
|---|---|---|---|---|---|
| Taking Computer Skills courses and e- political participation | -1,4848 | 1,3100 | -9,170 | 65 | 0,001 |

The Medium of the variable of taking computer courses was -1.4848 and Stan. Dev. was 1.3100, and referring to table 3 we can see that the ratio of those who studied Computer Skills I was 97%, a high ratio which is the reason behind the significant difference in this variable that did not motivate students' e-political participation, - a low participation, less than the required level.

**Third:**

In order to test the assumption which presumes that "there are no statistically significant differences attributed to using the computer in students' attitudes towards political participation at .05" the T-Test was applied to the two variables: the Medium of the students' use of the computer and their e-political participation. It is found that the Medium is -.909 and the Stan. Devi, 3212. and the statistical significance is .001, as illustrated in the following table:

**Table 7. Difference Related to the Variable of Hours of Computer Use**

| Variables | Medium | Stan. Dev. | T-Test | F.D. | significance |
|---|---|---|---|---|---|
| Hours of Computer use and e-political participation | -0,909 | 1,3212 | -0,09 | 65 | 0,001 |

From this table it appears that there is a negative indicator between computer use and e-political participation. The outcomes show a negative Medium. In table 4 the ratio of those who use the computer two hours daily is 51.5% and those who use it one hour daily 45.5%; this Mediums that the less students use the computer the less their e-political participation

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Referring to the descriptive statistics table we find that the Medium of computer use is spent in e-mailing, with a Medium of 3.3333. The Medium of using the computer for entertainment is 3.3636, which Mediums that the time used for these two purposes is more than that used for e-political participation. The Medium of using the computer for e-political participation is 2.5152, whereas that of checking Jordan's information site www.jordan.jo is 3.5142, which is high and can be an important indicator. The Medium of voting on issues published on www.jordan.jo is 2.6970. The Medium of using computer to conduct e- communication with the Ministry of Foreign Affairs to ask about some of its policies was 1.3210, which is weak. However, this did not motivate students' e- political participation in general, which leads us to reject the negative assumption that presumes that "there is no statistically significant difference attributed to the variable of computer use and e-political participation at .05.

**Fourth:**

In order to test the assumption which presumes that "there are no statistically significant differences attributed to gender in students' attitudes towards political participation at .05" we applied the T-Test to the relevant data, table (8). It is found that there are no statistically significant differences attributed to gender at .001, for the statistical significance is 70%, which shows that there are no differences between male and female students towards e-political participation. Thus we confirm the assumption that presumes that there are no statistically significant differences attributed to gender in students' attitudes towards e-political participation, as illustrated in the following table:

**Table 8. Difference Related to the Variable of Gender**

| Variables | Medium | Stan. Dev. | T-Test | F.D | significance |
|---|---|---|---|---|---|
| Gender and e- political participation | 0.1818 | 0.802 | 1.84– | 65 | 0.70 |

**Findings.**

The study reached the following conclusions:

1. The first assumption was rejected. The study showed that there were statistically significant differences attributed to the variable of academic year in students' attitudes towards e-political participation at .001, so the more advanced students were in their academic level, the higher their participation. But this stimulus did not lead to the required level.

2. As for the second assumption it was rejected. The study showed that there were statistically significant differences attributed to the variable of taking the Computer Skills courses in students' attitudes towards e- political participation at .001, but the correlation was so weak which is consistent with the prevailing

ineffectiveness of e-political participation through voting on political issues on the government's websites.

3. The third assumption was rejected. The study showed that there were statistically significant differences attributed to the variable of computer use in students' attitudes towards e-political participation at .001, which leads to the rejection of this assumption. It also showed that using the computer for entertainment and e-communication was the dominant form of use, which explains their scant e-political participation. Thus the results showed the negative relation between computer use and e-political participation.

4. The fourth assumption was confirmed. The study shows that there were no statistically significant differences attributed to the variable of gender in students' attitudes towards e-political participation at .001, which is logical due to the fact that at this academic level, the study and use of the computer is made accessible to both sexes. Still their participation did not reach the required level, which is consistent with the existence of a silent majority in traditional political participation.

**Conclusion.**

The study showed that even though the students had adequate knowledge of using computers, it did not motivate them in e-political participation. They did not utilize their computer skills except for purposes of entertainment, fun and e-mail.

The study also showed that there is a weak relation between using computers and e-political participation. In addition, the study showed that students' participation in conducting e-communication with the Ministry of Foreign Affairs to ask about some of its policies was weak, and that there were no differences in the levels of e-political participation according to students' gender.

In conclusion, the study recommends universities to do the following:

1. conducting awareness sessions for the students about the importance of their role in e-political participation through the development of their political knowledge;

2. designing and implemented compulsory e-programs for students touching upon using computers in their specialization or conducting e-political participation;

3. providing a suitable environment that motivates students to use computers to visit relevant sites where they can e-communicate, discuss and give opinion;

4. computerizing the annual students' union elections as practical demonstration of e-political participation;

5. and conducting more studies of the present type.

**References:**

1. Atef Omer Bin Tareef, "The Effect of Using the Computer in Teaching Statistics to Educational College Students on Their Achievement and Attitudes Towards the Computer", 2007, (Under Publication)

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3. Kevin Curran and Eric Nichols, "E-Democracy," Journal of Social Sciences ICI, 2005, pp. 16-18.

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6. Hasan A. Ayed, "The Influence of Internet In the Political Culture (Field Study),"Journal of Social Science, I (3), 2005, pp. 128-135.

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