Intention to Use Information Technology ethically; a path analysis model based on individual variables

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Abstract: The current study investigated the impact of individual variables of computer self-efficacy, perceived punishment severity and prior experience on intention to used information technology ethically. Data collected from two state universities in Iran during the academic year of 2010-2011. Sample consisted of 403 students who were selected using random categorical sampling method. Data analyses showed that all of the proposed paths were significant. Also, model fit indices showed that the presented model has a good fit for the current data. [Farshad Hajian, Najmeh- Sadat Mortaji. **Intention to Use Information Technology ethically; a path analysis model based on individual variables.** *Life Sci J* 2013;10(7s):134-138] (ISSN:1097-8135). http://www.lifesciencesite.com. 22

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Introduction

There is no doubt in the fact that information technology is changing many aspects of human life and activity. What are controversial are the social and ethical implications of these changes. This leads to several methods for the interpretation of the relationship between society and information technology. Each of these interpretations causes a different conceptualization of the relationship between society and information technology. So, ethical and social outcomes of information technology differ among individuals depending on the method of the interpretation.

The abundant researches and reports in the area of unethical use of information technology indicate that the growth of information technology and its use has raised ethical challenges amongst the societies. Now day's issues such as hacking, invasion of privacy, internet fraud and violence from copyrights are major concerns in the area of ethical use of information technology.

For avoiding or elimination of unethical use of IT, it is very useful to understand what motives and causes lead to this deviant behavior. Several studies have pointed to the social, cultural, economical, technological and individual factors that reinforce the intention or actual ethical or unethical use of information technology.

Based on what was discussed and the necessity of developing ethical studies in IT, the present study tries to present a model for intention to use IT ethically among students of two state universities in Iran based on the individual factors. Figure 1 shows the conceptual model of this study.

Hypotheses:

Hypothesis 1: the computer self-efficacy has a positive and direct influence on the perceived competence, Intention and attitude to use technology ethically.

Hypothesis 2: the severity of the perceived punishment has a direct and positive influence on the perceived competence and perceived behavioral control.

Hypothesis 3: the prior experience has a positive and direct influence on the attitudes toward the ethical use of technology and perceived behavioral control.

Hypothesis 4: the attitude toward using technology ethically has a positive and direct influence on perceived behavioral control and intention to use technology ethically.

Hypothesis 5: the perceived competence has a positive and direct influence on using technology ethically.

Hypothesis 6: perceived behavioral control has a positive and direct influence on intention to use technology ethically.

Hypothesis 7: Computer self-efficacy has a positive and indirect influence on intention to use technology ethically, through the intermediate roles of the perceived competence s, attitudes toward using technology ethically and controlling the perceived behavior.

Hypothesis 8: prior experiencehas a positive and indirect influence on the intention to use technology ethically, through the intermediate roles of attitudes toward using technology ethically and controlling the perceived behavior.

Hypothesis 9: the severity of the perceived punishment has a positive and indirect influence on intention to use technology ethically, through the intermediate role of the perceived competence and controlling the perceived behavior.

Hypothesis 10: attitudes toward ethical use influences intention to use technology ethically, through the

intermediate role of controlling the perceived behavior.

Methodology

Using the Cochran sampling formula andrandom categorical sampling, 481 copies of questionnaires were distributed in two universities according to the sample, and finally 460 copies were returned without any faults. Given the identification of items and elements of each variable and conducting factor analysis, items with low factor loads were deleted, the final questionnaire was distributed in a 30-member sample, and after validating, it was distributed in the whole sample. Table 1 shows the values of the Cronbach's alpha (reliability coefficients) for each variable.

Table 1: Values of Cronbach's alpha for variables

Finally, data were analyzed by estimating the correlation coefficients and using the path analysis with LISREL.

Findings:

Initially, the correlation matrix for variables was estimated. Table 2 shows the correlation matrix for variables.

As the above table shows, the correlation coefficients are significant between all of the variables. This shows the internal consistency of the measures. Also this finding shows us that we can use path analysis to analyze the data. As we know, the positive relationship between the variables is one of the prerequisites for conducting path analysis. The above table shows that; the highest correlation coefficient belongs to the relationship between computer self efficacy and intention for ethical use of information technology.

Testing hypotheses

Hypothesis 1: The direct influence of the computer self-efficacy on the intention to use technology ethically (0.18) with t=6.30 is significant at 0.01. The direct influence of the computer self-efficacy on the perceived competence (0.25) with t=4.47 was significant at 0.01. Therefore, the first hypothesis supported.

Hypothesis 2: The direct influence of the severity of the punishment on perceived competence (0.18) with t=8.21 was significant at 0.01, the direct influence of the severity of the perceived punishment on perceived behavioral control (0.33) with t=3.61 was significant at 0.01. So, the second hypothesis supported.

Hypothesis 3: The influence of the prior experience on attitudes toward ethical use (0.40) was significant at 0.01. It also had a significant influence on perceived behavioral control with (0.42) and t=13.21. Therefore, the third hypothesis supported.

Hypothesis 4: The direct influence of the attitudes toward ethical use on perceived behavioral control (0.18) and t=4.28 is significant at 0.01. Also, its influence on the intention to use technology ethically (0.11) and t=2.12 was significant at 0.05. Therefore, this hypothesis was supported.

Hypothesis5: The direct influence of the perceived competence on ethical use (0.45) and t=14.07 was significant at 0.01. Therefore, this hypothesis supported.

Hypothesis 6: The direct influence of perceived behavioral control on the intention to use technology ethically (0.20) with t=5.84 was significant at 0.01. Therefore, this hypothesis supported.

Hypothesis 7: The indirect influence of the computer self-efficacy on intention to use technology ethically (0.12) with t=5.40 was significant at 0.01. Therefore, this hypothesis supported.

Hypothesis 8: The indirect influence of prior experience on the intention to use technology ethically (0.18) with t=6.84 was significant at 0.01. Therefore this hypothesis supported.

Hypothesis 9: The direct influence of subjective norms on the perceived competence (0.140 and t=3.38 was significant at 0.01. also, its influence on the intention to use technology ethically (0.09) and t=2.80 is significant at 0.01. therefore this hypothesis supported.

Model fit indices and the fit model

In order to study the fit of the model, model fit indices were used. Generally, among various existing goodness of fit indices, in this study, RMSEA, CFI[1], NFI, and AGFI are reported.

Based on the goodness of fit indices presented in table 3, the model for predicting intention to use technology ethically has a good fit.

Discussion and Conclusions:

The present study aimed at investigating factors impacting the intention to use e-learning amongst the students of two state universities in Iran. Specially, factors such as computer self-efficacy, perceived punishment severity, prior experience and perceived competence considered as individual factors.

The results of the study showed that there is a significant relationship between individual factors and intention to ethical use of information technology. As the results showed, all the proposed hypotheses were supported and this indicate that all of the individual variables has a direct significant impact on the intention to use IT ethically.

Specially, findings of the current study confirmed some previously proposed paths for the prediction of the ethical use of information technology and also has added new paths.

One of the distinguishing aspects of the current study is that the current study has considered perceived

[1]Comparative Fit Index

competence as an individual variable. This means that some aspects of psychological empowerment can impact the intention to use information technology ethically. So, it necessitates the future studies that can investigate the impact of psychological empowerment and its dimensions such as perceived competence (or may be perceived autonomy) on the ethical use of information technology.

The results of the study are in line with those of Ajzen (1991), Davis (1989), Fishbein and Ajzen (1975), Marakas, Johnson and Clay (2007) and Carpenter et al (2006).

In the current study, the ethical use of information technology has been measured by the scales developed by non-Iranian authors while, the questionnaire is used in the context of Iran. So, it is better to consider this fact when applying such questionnaires because there are difference conceptualization of ethics and ethical behaviors between the different cultures.

Other remark of the current study is the fact that it has used the variable "prior experience" as an individual factor impacting ethical use of information technology. This variable has been less studied in the researches on the intention to use technology. As the results indicate, this is very useful to test the impact of this variable in other studies too.

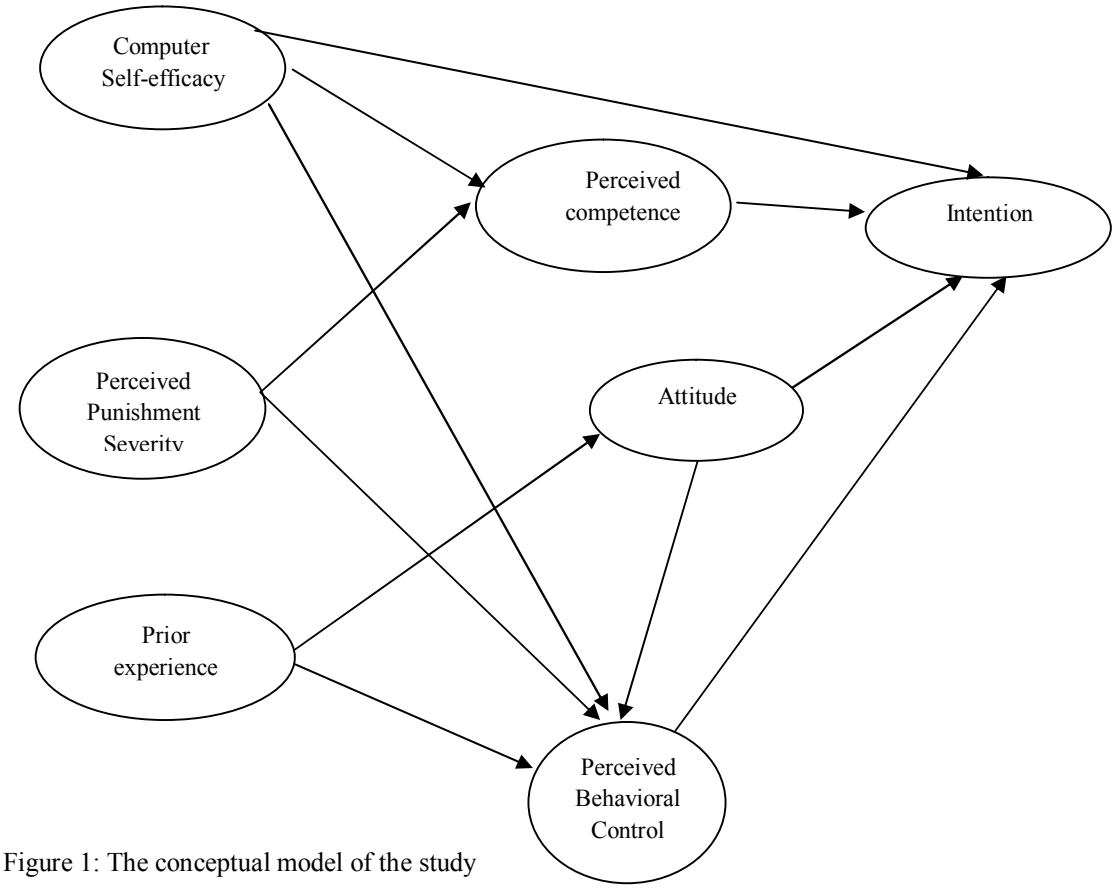

Figure 1: The conceptual model of the study

Table 1: Values of Cronbach's alpha for variables

Variables	Cronbach Alpha
Computer Self-Efficacy	**0.66**
Perceived Behavioral Control	**0.85**
Intention	**0.71**
Perceived Severity of Punishment	**0.7**
Competence	**0.88**
Prior experience	**0.71**
Attitude	**0.74**

Table 2: The correlation matrix for the variables

Variables	1	2	3	4	5	6	7
Intention to Ethical Use of IT	**1**						
Computer Self-Efficacy	0.566**	**1**					
Prior experience	0.482**	0525**	**1**				
Perceived Severity of Punishment	0.365**	0.290**	0.338**	**1**			
Perceived Behavioral Control	0.401**	0.395**	0.694**	0.115**	1		
Attitude toward Ethical Use	0.486**	0.519**	0.637**	0.101**	0.365**	1	
Perceived competence	0.626**	0.332**	0.291**	0.425*	0.121**	0.223**	1

*<0.05 **<0.01

Table 3: Goodness of fit indices of the model

Fit indexes	Fit indexes
GFI	0.98
NFI	0.96
CFI	0.98
RMSEA	0.069
X^2/df	1.75
P Value	0.089

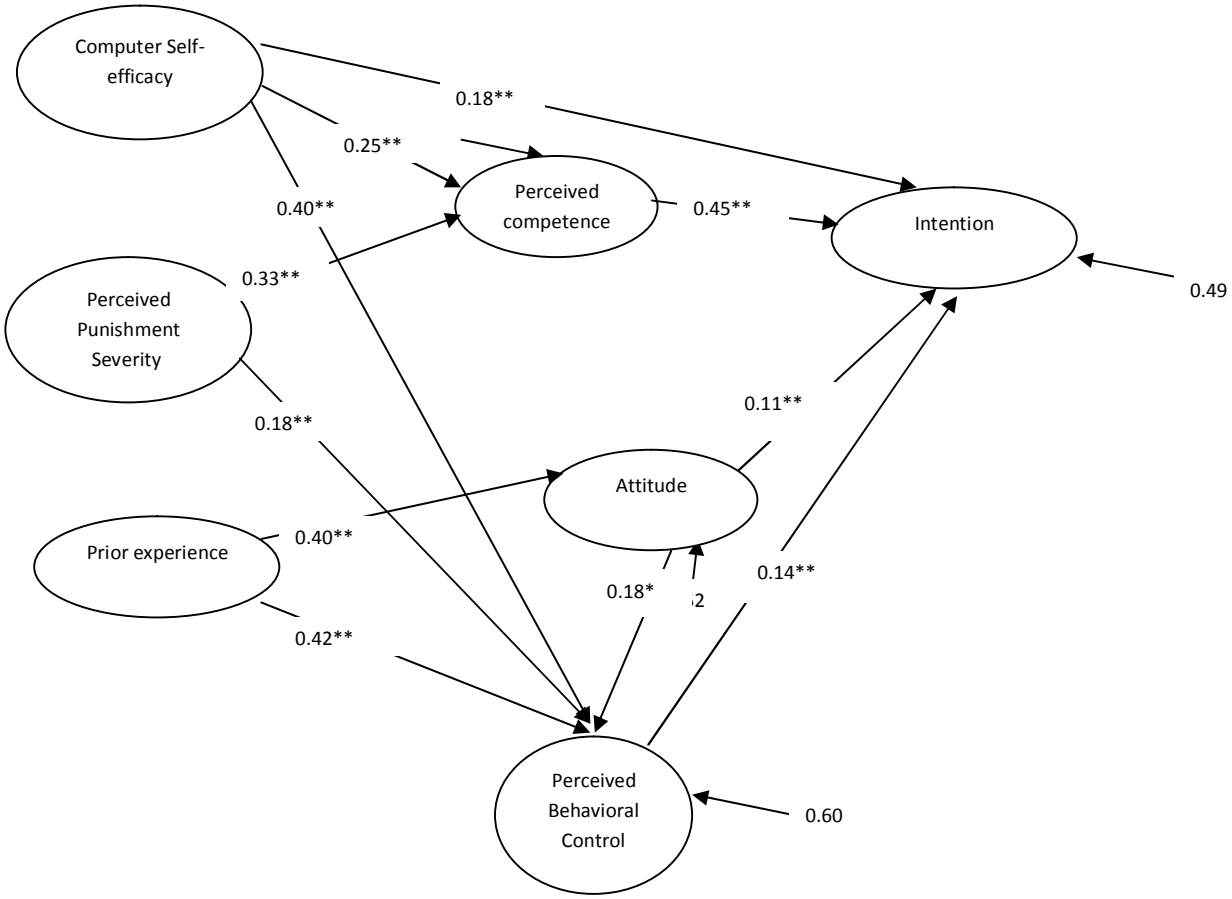

Figure 2- the path graph fitted

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