

Survey and Identify of Effective Factors on Education Technologic Selection and Efficiency By Sport Management Faculty of All Iran Azad Universities (A Efficient Technology Strategic Model)

Iman Safaei¹, Dr Farideh Ashraf Ganjoei², Dr Ali Zareie³

1. Ph.D Student, Department of Physical Education and Sport Sciences, Central Tehran Branch, Islamic Azad University, Tehran, Iran

2. Department of Physical Education and Sport Sciences, Central Tehran Branch, Islamic Azad University, Tehran, Iran

3. Department of Physical Education and Sport Sciences, Central Tehran Branch, Islamic Azad University, Tehran, Iran

Received: Dec. 2014 & Published: Feb. 2015

Abstract :

This study aimed to survey barriers that physical education faculty encounter in efficient use of update technologies that finally resulted in offering a model for effective factors on selection and efficiency of faculty Participations of this research were all faculty.

(full or part time) that teach at least on of the sports management course in Azad Islamic universities across country (n=700). In order to gather data, Wilson Loni question naire (SMAT,2007) includes 138 question was used; which valid by experts and proficients views.

Also it's reliability was confirmed by cron bach's Alpha (0/83). Statistics method of this research was descriptive fitting and descriptive statistic, means, std, deviation, correlation coefficient and Fridman test were used to data analysis by spss software. Also structural equation modeling method and „Lisred“ software were used to verify offering model. Results of correlation matrix of first hypathesis variables showed that there is a significant relationship between individual effective factors on technology selection by faculty and selected technology kind. However among all individual factors, „student requirements“ and „organization vocation policy“ are have high important and efficacy. Correlation matrix of second hypathesis variables showed that there is a significant relationship between organization effective factors on technology selection by faculty and selected technology kind and „Technical support“ and „Availability“ have most important and efficacy. Correlation matrix of third hypathesis variables showed that there is a significant relationship between individual effective factors on technology selection and educational technology efficiency of sports management students. Also model of individual effective factors on technology efficiency was evaluated for that certain technology in this research and had fitting.

Correlation matrix of fourth hypothesis showed that there is a significant relation ship between organization effective factors on technology selection and educational technology efficiency of Sport management students.

Like wise model of organization effective factors on technology efficiency was evaluated for that certain technology and had fitting. Results of fifth hypothesis survey showed that model of effective factors on selection and efficiency of sports management educational technology have fitting with data so have been verified.

Keywords: Educational technology, efficiency, sport management faculty

Introduction :

Now a days every one heard a bout „IT“ and have been profited frm it’s berefits . One important base for development and improvement of „IT“ is internet and for tunutely most computer are connected to this global network. For this reason development of IT have direct and indivect effects on almost all human life affairs. Development and improvement of IT result in presenting most services without place limitation. Technology like sports management have increasing development in short time, faculty in 1970 and 1980 presented their educational programs without benefits of computer using and only their sducational tools were blackboard and videoprojector and students didn’t know necessity of E -mail and internet use. (Edmund son,2008). Depauw (1998) a bout increasing use of educatinal technology said perhaps most strong and challenging external factor for universities is technology. Technology have strong relationship with a cademic places. Depauw (1998) according to outlook of physical education and sport sciences suggested that : benefits of technology ues in this field could be in data gatering, analysis, and exchange of data beside in distance or E-learning. So we can use technology as a tool to enrich our educational environment and organizations. Wai - tsz fong et all (2001) concluded that positive view points to digital educational technology use when have most efficiency and efficacy that universities have such policies and strategies that improve faculty perception and view points abot technology. (wai fong et all 2014). Karin Archer, et all (2014) survey faculty perception of technology use strategies apply by university responsible.

Results showed that there is significant relation ship between organization strategies and policies, organization culture and educational technology use by faculty with their technology efficacy. (karin Archer, et all 2014).

Richard. F et all (2014) concluded that positive viewpoints a bout technology use can by effective intechology use in education and teach, also results showed that professors use different technology in teaching. (Richard. F. et all 2014).

Chun lai (2014) in a research built a model for effect of faculty on technology use trend of students. He concluded that student’s reqiirement consideration , stimulant support and interest creation in students by facutty create a high perception of technology usefulness in students. More over hard ware and behaviour support could rein forcement and facilitate use conditions and efficiency of computer technology, so finally coduct students to suitable educational technology use.

(chun lai 2014) courtney k (2014) concluded that teacher’s at titudes and educational technologies value have effect on their technology use xtent in teaching. (that organization support and assurance are mediate factors here).

Like wise supports and policies of organizaion managers could creat positive view points a bout technology use in teachers. Unlike experienced teachers have negative view points a bout technology use.

(courney k . 2014).

Akom phosuwan, et all (2013) : in a research a bout in novations and educational media in „Tailand“, concluded that organization policies and trends, enough resourse and knowledge have most efficacy on technology use in elucation and teach (Akom phosuwan, et all 2013)

Robin H.et all (2012) in a research entitled A Review of the literature in use audi orisual technology in education concluded that teacher’s positive viewpoints a bout these technologies causes learning control and improves teaching methods and learning level. Also main chalenges that faculty encounter in technology us are :

Variety of technical problems, specific requirement of some students and their interest to lecture method that reduce their attendance in class. (Rabin H. et all 2012). Vogel D & klassen presented different procedures and debates a bout technology use in higher education. Main factor in their assessment was : survey of technology efficacy on faculty and their teaching method. They concluded that professor who like to reassessment education methods, use new educational technologies that improves student learning. Also they suggested that use education method (that assume is only effective and stimulant system) is one of the ansuitable and in adequate (vogel & k lassen 2001). Martina papastergiuous conducted a research entitled enrichment physical education student efficiency and view points a bout information and communication technologies through computer education courses , survey student’s perception level a bout these course effieacy and concluded that these courses cause signiticant increase in computer and internet efficiency of student although decrease their motivation and excitement a bout computer use. (Marina papastergiou 2020). However aut hors according to hecessity and important of update technology use in education and most important effective factors in this process decided to propose a comprehensive model for effective factors related to technology selection and efficiency of sport management faculty and students in all Iran Azad universities faculty while try to over come barriers of education technics adjustement and adopting need information, case study and instances. Over 15 recent years in the literature professional improvement and education were main debates. (Bauer, & MC Allister,2003); probably sport management faculty interest in these debates.

Although effective factors on technology dominace in sport management education have not been studied specially, but some researchs in this field showed that there are many barriers in technology use by sport management facutty. This study aimed to survey situation in technology use by sport management faculty for education first, we survey information about technology structure that use in sport management courses.

This research facus on information gothering about kind of educational technologyies which used by faculty in teaching and by students in doing their class works. Third purpose was explore faculty perception about essential technologies which students must acquire skills to use them. Forth, effective factors (negative or positive) on technology use by faculty were studied. Finally this research present useful information a bout preparing sport management student for technology use.

Hence according to this fact that professional improvement and faculty education is one of the main study field in the literat are over 15 recent years, and faculty need information, case study and instans to over com on barriers of education technics adgustement and adopting. So this research aimed to survey and identify effective factors on selection and efficiency of

educational technologies by sport management faculty in all Iran Azad universities to introduce barriers that faculty encounter in efficiency use update initiative technology and finally we introduce a new model for sport management faculty, experts and especilest in academic environment.

Method :

This study is an applied one according to its purposes and descriptive – exploratory according to data gathering and use survey research model and was done cross sectional. Like wise this is a case study research with structural equation model approach. Participants were all faculty (full or part time) who teach at least one of the sport management courses in all Iran Azad universities and sample was chosen by cluster random sampling method. Data gathering was done with sport and technology management questionnaire (SMAT, 2007 ; Wilson. Loni) which includes 138 questions. Validity of this instrument was verified by experts and proficient . Also we chose a 40 participants group and they completed the questionnaire and its reliability confirmed by cronbach's Alpha (0/83).

Descriptive statistic analysis, mean, s.t.d deviation and correlation coefficient were used to data analysis.

(with spss software). Also we use structural equation modeling and lisrel software to evaluate this research model.

Results :

Descriptive results show that 120 male (73/1 %) and 10 female (26/9%) participated in this research. So majority of participations were male. Also 41 participations (15/8%) have 1-5 years experience, 6(25/4%) have 0-10 years, 89 (34/2%) have 10-15 years and 64 (24/6%) have over 15 years, so majority of participants have 10-15 years experience.

Items	Individual factors	Organizational factors	efficiency	Technology selection
Individual factors	1	0/55	0/97	0/35
Organizational factors	0/55	1	0/52	0/42
efficiency	0/97	0/52	1	0/48
Technology selection	0/35	0/42	0/48	1

Table1 : correlation matrix of variables

Table 1 shows that there is a significant relationship between individual factors, organizational factors with technology efficiency ($\alpha = 0/01$) and with technology selection ($\alpha = 0/05$). Likewise there is a significant relationship between organizational factors with

technology efficiency and selection, ($\alpha = 0/01$). Also results of Table1 shows that there is a significant relationship between selection with efficiency ($\alpha = 0/01$)

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	CFI	IFI
Fitting of individual factors	4.66	0.04	0.91	0.93	0.95	0.98	0.78
Acceptance limit	1-5	<0.5	>0.9	>0.9	>0.9	>0.9	0-1

Table 2 : fitting factors of individual factors.

Lisrel out puts show that fit indexes values are acceptable and all values and load factors are equal or more that (0/3) so are acceptable.

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	CFI	IFI
Fitting of organizational factors	1.93	0.013	0.97	0.96	0.99	0.90	0.80

Table 3 : fitting indexes of organizational factors.

Out puts of lisrel soft ware show that fitting indexes values are suitable and all values and load factors are equal or more than (0/3). So are acceptable. These results show that organizational factors measuring model is suitable according to fitting indexes.

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	CFI	IFI
Fitting of technology selection	1.54	0.027	0.95	0.95	0.91	0.93	0.64

Table 4 : fitting indexes of technology selection.

According to lisrel out puts we conclude that fitting indexes are suitable and all values (numbers) and load factors are acceptable, be cause are equal or more that (0/3).

Fit index	χ^2/df	RMSEA	GFI	AGFI	NFI	CFI	IFI
Fitting of efficiency	4.62	0.087	0.91	0.99	0.97	0.98	0.49

Table 5 : fitting indexes of efficiency

Out puts of lisrel soft ware show that fitting indexes values are suitable and all values (numbers) and load factors are acceptable because are equal or more than (0/3). So efficiency measuring model is suitable according to fitting indexes.

Relation ship (hypothesis)	sig	Structural coefficient	Value	Compare with critical - value	Relation ship kind
Individual Factors \longrightarrow technology selection	significant	0/78	10/52	10/52>1/96	direct
Organizational technology \longrightarrow factor selection	significant	0/72	9/23	9/23>1/96	direct
Individual \longrightarrow Factors efficiency	significant	0/56	8/14	8/14>1/96	direct

Organizational	→	Factor efficiency	significant	0/65	8/89	8/89	direct
Selection	→	efficiency	Significant	0/71	02	02	direct

Table 6 : direct effect of factors on each other

Results of table 6 show that values of individual factors direct effect on technology selection are ($y = 0/78$, $p < 0/01$).

Likewise values of organizational factors direct effect on technology selection are ($y = 0/72$, $p < 0/01$). Also values of individual factors direct effect on efficiency of students are ($y = 0/56$, $p < 0/01$) and values of organizational factors direct effect on efficiency are ($y = 0/78$, $p < 0/01$). Also values of technology selection direct effect on student's technology efficiency are ($y = 0/78$, $p < 0/01$).

No	Technologies pirories
1	communication
2	source
3	presentation
4	management
5	gathering
6	Analysis

Table 7 : Technologies pirories

Table 7 shows that according to sport management faculty view points communication technology are very important for students before they start struggle.

No	Individual factors pirories
1	student's requirements
2	Organization vocation policy
3	fear
4	education
5	time
6	Belive to a special education method
7	Stimu lation

Table 8 : individual factors pirories

Table 8 show that according to faculty view points , „student's requirements“ and „organization vocation policy“ among individuale factors are very important for students befor start struggle.

No	Technologic efficiency pirories
1	Presenttation technology
2	Class management technology
3	Data analysis technology
4	Data gathering technology
5	Web design technology

6	Graphic arts technology
7	Communication technology
8	Audio visual technology

Table 9 : Technologic efficiency priorities

Table 9 shows that according to sport management faculty „presentation technology„ and „class management technology„ among technologic efficiency factors are very important for students before start struggle.

No	Organizational factors priorities
1	Availability
2	Technical support
3	Organization culture
4	Organization rewarding system
5	Organization out look
6	Organization financial support

Table 10 : organizational factors priorities

Table 10 shows that according to faculty viewpoints „Availability„ and „Technical support„ among organizational factors are very important for students before start struggle.

Discussion and conclusion :

Results of correlation matrix of variables in current study showed that according to t – value (in T – test) or significant value of correlation in model of effective factors on faculty technology selection and efficiency is equal or more than (1/97), so this value is acceptable. Like wise all hypothesis of research were confirmed. In other words proposed model in this research can assessment individual and organizational factor effects on technology selection and technologic efficiency and has fitting, so it is a reliable model.

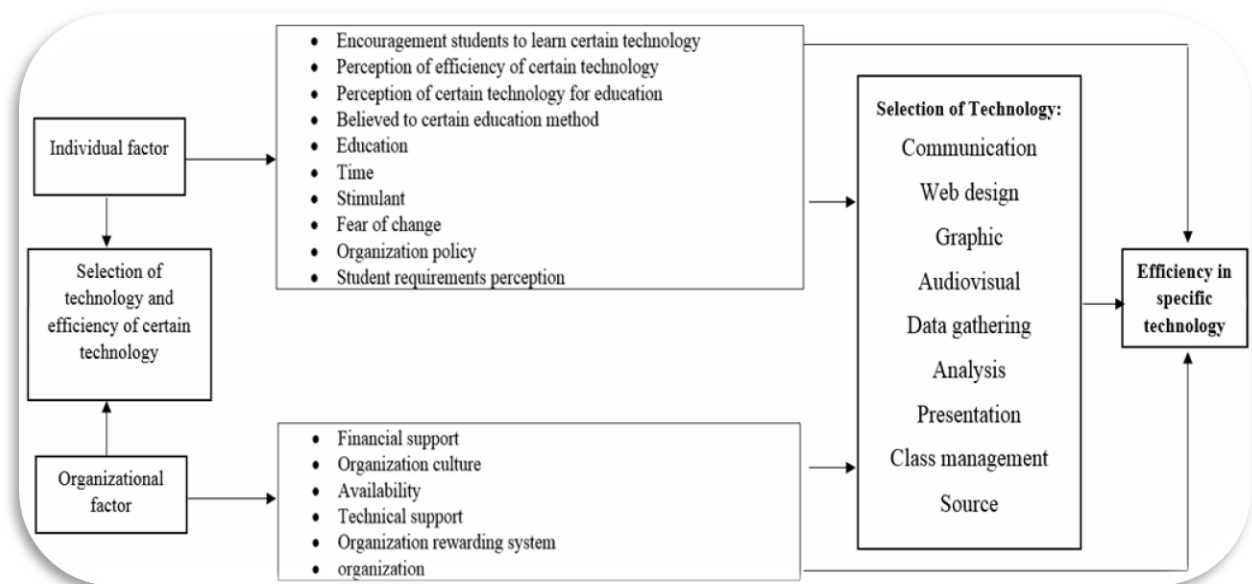
Main factor in their assessment was : survey of technology efficacy on faculty and their teaching method. They concluded that professor who like to reassessment education methods, use new educational technologies that improves student learning. Also they suggested that use education method (that assume is only effective and stimulant system) is one of the suitable and in adequate (vogel & k lassen 2001). Martina papastergiou conducted a research entitled enrichment physical education student efficiency and view points about information and communication technologies through computer education courses , survey student's perception level about these course efficacy and concluded that these courses cause significant increase in computer and internet efficiency of student although decrease their motivation and excitement about computer use. (Marina papastergiou 2020). However authors according to necessity and important of update technology use in education and most important effective factors in this process decided to propose a comprehensive model for effective factors related to technology selection and efficiency of sport management faculty and students in all Iran Azad universities faculty while try to overcome barriers of education technics adjustment and adopting need information, case study and instances. Over 15 recent

years in the literature professional improvement and education were main debates. (Bauer, & MC Allister,2003); probably sport management faculty interest in these debates.

Although effective factors on technology dominance in sport management education have not been studied specially, but some researchs in this field showed that there are many barriers in technology use by sport management faculty. This study aimed to survey situation in technology use by sport management faculty for education first, we survey information about technology structure that use in sport management courses.

This research focus on information gathering about kind of educational technologies which used by faculty in teaching and by students in doing their class works. Third purpose was explore faculty perception about essential technologies which students must acquire skills to use them. Forth, effective factors (negative or positive) on technology use by faculty were studied. Finally this research present useful information about preparing sport management student for technology use.

Hence according to this fact that professional improvement and faculty education is one of the main study field in the literat are over 15 recent years, and faculty need information, case study and instans to over com on barriers of education technics adgustement and adopting. So this research aimed to survey and identify effective factors on selection and efficiency of educational technologies by sport management faculty in all Iran Azad universities to introduce barriers that faculty encounter in efficiency use update initiative technology and finally we introduce a new model for sport management faculty, experts and especilest in academic environment.



Model of effective factors on sport management educational technology

This model survey group of factors which have effect on technology selection and efficiency. This model has three kind of variables individual and organizational factors are predictor variables, technology selection is mediator variable and technologic efficiency of sport management students is criteria variable, and finally the model was confirmed by structural equation modeling method. In sum we concluded that above individual and organizational

factors have effect on new technology selection and utilization in teaching, in turn improves student efficiency in that certain technology.

However attitude to technology, efficiency perception and stimulant to use it are important predictor of technology use. Hence author according to necessity and importance of update technology use in education and most important effective factors in this process decided to propose a comprehensive model for effective factors related to technology selection and efficiency of sport management faculty and students in all Iran Azad universities.

Some researcher already study effective factors on technology selection, use and efficiency and their findings are similar with current study results, such as :

Karin Archer, et al (2014), Richard. F. et. Al (2014), Courtney K, et al (2014), Akom phosuwan, et al (2013), Robin.

H. et al (2012), Timothy Teo (2011),...

However as a general result we can conclude that education technology advances have extensive effect on faculty education and teaching so its utilization increasing develop and now a days. Every one know its positive effects on education.

In the other hand every day new capability of technology appearance in production, presentation, and transmission of data that introduce new method in teaching and education – However it is necessary to have new regard to technology and use it to improve education quality and efficiency and save the time.

Also overcome to place problems but this work requires educational responsible pay attention more to this process also education experts (special IT experts) try to identify new advances in technology and introduce them to society, while coordinate them to our society.

Hence we propose that managers and other high responsible of universities pay special attention to effective factors on technology selection and use try to remove barriers of technology use in academic environment. They also must pay special attention to stimulation problems of faculty in new technology use.

Reference :

1. Akom Phosuwan, ET al (2013). Factors related the Utilization of Instructional Media and Innovation of Nursing Instructors at Boromarajonani College of Nursing, Suphanburi, Thailand. *Procedia - Social and Behavioral Sciences* 103 (2013) 410 – 415.
2. Bauer, W.I., Reese, S., & McAllister, P.A. (2003). Transforming music teaching via technology: The role of professional development. *Journal of Research in Music Education*, 51 (4), 289-301.
3. Caruso, J.B. (2004a). Roadmap: ECAR study of students and information technology, 2004: Convenience, connection, and control. Retrieved Nov. 21, 2004 from www.educause.edu/2004CurrentIssuesSurveyResults/1715
4. Chun Lai, et al (2014). Modeling teachers' influence on learners' self-directed use of technology for language learning outside the classroom. Available online at www.sciencedirect.com *Computers & Education*, In Press, Accepted Manuscript, Available online 18 November 2014, Chun Lai.

5. Courtney K, ET all (2014). Factors influencing digital technology use in early childhood education. *Computers & Education*, Volume 77, August 2014, Pages 82-90.
6. Cuneen, J. (2008). Managing program excellence during our transition from potential to merit. *Journal of Sport Management*, 18, 1-12.
7. DePauw, K.P. (1998). Futurisktic perspectives for kinesiology and physical education. *Quest*, 50, 1-8.
8. Edmundson, M. (2008). Dwelling in possibilities. *The Chronicle of Higher Education*, 54(27), B7.
9. Gi-Zen Liu, ET all (2013). Technology in special education: A state-of-the-art review of selected articles published in 2008–2012. *Research in Developmental Disabilities*, Volume 34, Issue 10, October 2013, Pages 3618-3628.
10. Hall, M. & Elliott, K.M. (2003). Diffusion of technology into the teaching process: Strategies to encourage faculty members to embrace the laptop environment. *Journal of Education for Business*, 78 (6), 301-307.
11. Husin Chua, ET all. Factors influencing the Technological Pedagogical Content Knowledge (TPACK) among TVET instructors in Malaysian TVET Institution, 2012. Available online at www.sciencedirect.com. International Conference on Education and Educational Psychology (ICEEPSY 2012). *Procedia - Social and Behavioral Sciences* 69 (2012) 1539 – 1547.
12. Karin Archer, ET all (2014). Examining the effectiveness of technology use in classrooms: A tertiary meta-analysis. *Computers & Education*, Volume 78, September 2014, Pages 140-149.
13. Lila Holt, Ralph G. Brockett (2012). Self-direction and factors influencing technology use: Examining the relationships for the 21st century workplace. *Computers in Human Behavior*, Volume 28, Issue 6, November 2012, Pages 2075-2082.
14. Lindner, J. R., & Murphy, T. H. (2001). Student perceptions of WebCT in a web-supported instructional environment: Distance education technologies for the classroom. *Journal of Applied Communications*, 85 (4), 37-52.
15. Mark Stieninger,et all (2014). Impacts on the organizational adoption of cloud computing:A reconceptualization of influencing factors. Available online at www.sciencedirect.com, *Procedia Technology* 16 (2014) 85 – 93.
16. Marina Papastergiou, (2010). Physical education and sport science undergraduate students as multimedia and web developers: Moving from the users to the creator's perspective. Published online: 18 May 2010, Springer Science Business Media, LLC 20,) 16:281-299.
17. Mehpare Saka, Examination of relationship between preservice science teachers' sense of efficacy and communication skills. *Procedia Social and Behavioral Sciences* 2 (2010) 4722–4727.
18. NASSM Website. (2007). Academic programs in sport management. Retrieved October2, 2007 from <http://nassm.org>.

19. Nihat Ekizoglu, ET all, (2010). Teacher candidates' real success situation on computers and their attitudes towards computer technology in the faculties of education. *Procedia Social and Behavioral Sciences* 9 (2010) 1969–1982.
20. Richard F ET all, (2014). The effects of technology use in postsecondary education: A meta-analysis of classroom applications. Available online at www.sciencedirect.com. *Computers & Education*, Volume 72, March 2014, Pages 271-29.
21. Robin H. Kay (2012). Exploring the use of video podcasts in education: A comprehensive review of the literature. Available online at www.sciencedirect.com. *Computers in Human Behavior*, Volume 28, Issue 3, May 2012, Pages 820-831.
22. Said Al-Senaidi, ET all (2009). Barriers to adopting technology for teaching and learning in Oman. *Computers & Education*, Volume 53, Issue 3, November 2009, Pages 575-590.
23. Sport Management and Technology (SMaT) Survey. Lonni Wilson, the Ohio State University, 2007.
24. Timothy Teo, (2011). Factors influencing teachers' intention to use technology: Model development and test. *Computers & Education*, Volume 57, Issue 4, December 2011, Pages 2432-2440.
25. Vogel, D. & Klassen, J. (2001). Technology-supported learning: Status, issues, and trends. *Journal of Computer Assisted Learning*, 17 (1), 104-114.
26. Wai-tsz Fong, ET all, 2014. Digital teaching portfolio in higher education: Examining colleagues' perceptions to inform implementation strategies. Available online at www.sciencedirect.com. *The Internet and Higher Education*, Volume 20, January 2014, Pages 60-68.