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Surveying the infrastructures required for implementation of e-learning in smart schools in Bushehr Province

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Abstract

Although today the evaluation is concerned as one of the most significant processes of management in all of organizations, this issue has been much more paid attention in universities and higher education institutes for training expert human resources and producing knowledge and technology. Also, the evaluation of teaching quality is one of the major criterion for accreditation any university and efficacy of that university's academic faculties as well. This paper is to survey the attitude towards the evaluation of teaching quality done based on the surveying and comparing students' and professors' views among three groups of business management, industrial management, and accounting departments in Persian Gulf University in Bushehr. This is a descriptive-surveying study, so a research-structured questionnaire was applied to measure and evaluate the teaching quality. Statistical population consisted of 1280 students studying in Persian Gulf University among which 276 persons were randomly selected based on stratification sampling method and 28 faculty members. Content analysis was used for validity and Chronbach's Alpha was also used for reliability(α=0.92). Findings, based on T-test, ANOVA, Regression Analysis, Factor Analysis, and Pearson's Correlation Coefficient, showed that the following indexes would be known as the effective factors on the attitude and evaluation of teaching process quality respectively: quality evaluation, satisfaction of evaluation results, keeping educational regulations, teaching style, applying education technology, student and professor exchange, awareness of evaluation goals, and entire satisfaction from research activities.

Key words: Smart school, e-learning, software infrastructures.

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1. Introduction

ITC could have made so many changes in human being life through short time of its emerging. One of the most significant changes done by ICT is learning somehow using ICT has brought up a new scientific field known as electronic learning or shortly e-learning. Deleting the limitation of age, space, place, and so many other good factors are all resulted from ICT.

E-learning has usually an appropriate flexibility for every learner and participators are not restricted by time and place (Adrian, 2000), so educational institutes have recently initiated the learning through using internet and it can facilitate educational matters easily and cheaply.

E-learning can help learner identify what he or she really wants and like for learning based on his/her eagerness and interest and according to Aghazamani(2008), learners can control educational factors based on their willing and times.

Importance of knowledge and learning is nowadays not only concluded in educational institutes but industrial organizations' managers are to follow new ways of learning for its easiness.

Regarding the importance of e-learning, the first question raised is how to use the existing facilities in organizations and institutes to make usefully educational programs; therefore, in order to get this aim, the methods and equipment must be recognized well since it is one of the main infrastructures for having any successful entity.

Choosing suitable methods and educational effectiveness and its role in learning improvement are expensive matters and management of any organization must be aware of its importance to be able to remain in rivalry and it is a matter concerned more than the other activities today (Rezaiy, 1997). This paper is to survey the required infrastructures for implementation of e-learning in smart schools in Bushehr Province somehow education can be accessible for all learners more easily and availably.

2. Literature Review

Surveying the students' attitude about e-learning in Shiraz college, Rokni(2008) stated that students' attitude about e-learning was positive regarding the dimension of virtual learning, role of virtual learning, learning-teaching development, education social needs, facilities and equipment. Results also showed that there would be a significant difference between male and female students' attitude about social needs, virtual learning, and college facilities for e-learning.

Taghvaiy (2007) reviewed e-learning status in Iran based on academic faculties and students attitude and concluded that six factors could play the main role for better e-learning including management and encouragement, virtual presence and exchange, students' patronage, e-commitment and skill, interchangeable context, and having positive attitude for taking advices.

Maghami(2006) surveyed virtual learning indices and feasibility in implementation of e-learning in psychological and training sciences university in Tehran and claimed that most of participants believed that in order to implement e-learning, some required facilities should be concerned such as related soft wares, sufficient hard wares, digital library, and human resources infrastructure.

Developing some educational contents and its standards for designing virtual courses, Sharifi(2005) pointed out that in order to have any improvement in virtual courses quality, some factors should be concluded such as teachers' familiarity with courses and virtual contexts, supervision on content compiling along with making students enthusiastic for participating in virtual and e-learning courses.

Zamani (2004) surveyed the barriers and constraints in e-learning in high schools in Tehran based on teachers and could find out that four factors had the most interfere in virtual and e-learning courses including financial constraints, technical constraints, humanistic constraints(attitudinal and skill-related one) and organizational constraints.

Jalali (2005) reviewed adult motivation in e-learning and found out that adult participators in e-learning courses had announced they would prefer to improve their job status and they had chosen these courses since these courses had enough flexibility and required easiness.

Studying students' attitude about e-learning in selected courses related to agriculture classes, Amnia (2005) showed that students could have learned primary concepts some more easily while having had less help from their teachers.

Argris (2005) studied a case aimed to e-learning participators' attitude and their reasons for being failed or succeeded and finally claimed that individual eagerness of any learner have been the main factor for being successful.

Dehler (2003) surveyed e-learning and virtual learning among students of Utah University and could examine three aspects of e-learning including students' theoretical concepts about e-learning, students' perceptions, and students' eagerness and finally find out that most students would like to experience virtual courses since they could have learned more issues than face to face(traditional) classes.

3. Research Question

- What are the required infrastructures for applying effective e-learning in Blusher smart schools?

4. Research Hypotheses

4.1. There is a significant difference between software infrastructures for e-learning based on teachers' and staffs' attitude.

4.2. There is a significant difference between hard ware infrastructures for e-learning based on teachers' and staffs' attitude.

4.3. There is a significant difference between logistic resources for e-learning based on teachers' and staffs' attitude.

4.4. There is a significant difference between professional skills for e-learning based on teachers' and staffs' attitude.

5. Methodology

This is a descriptive-surveying research whose statistic population consisted of 602 male and female teachers among which 234 persons were randomly selected based on Cochran's Formula. Data were gathered via two researcher-structured questionnaires having 46 items based on Likert scale. Content analysis was used for validity and Cronbach's Alpha was also used for reliability(α=%750). Also some statistical indices were used to analyse the gathered data such as frequency, percent, mean, SD, Chi square and factor Analysis.

6. Results

Table 1.ANOVA results for PS about E-learning based on Teachers' view

Variable	Schools	Frequenc	Mea	SD	f	Sig.	Rank
Professiona Skills (PS)	1	115	6.93	4.315	2.016	0.054	8
	2	7	6.71	4.309			7
	3	15	7.93	3.534			4
	4	9	8.56	3.282			3
	5	15	9.26	2.051			2
	6	11	7.45	3.777			6
	7	30	9.33	1.953			1
	8	21	7.57	3.325			5
	9	11	7.62	3.813			9
	Total	243					-

Table 2.ANOVA results for HWI about E-learning based on Teachers' view

Variable	Schools	Frequency	Mean	SD	f	Sig.	Rank
Hard Ware Infrastructur (HWI)	1	115	12.83	4.209	1.7	0.098	8
	2	7	15.14	3.023			2
	3	15	13.73	3.712			5
	4	9	13.75	3.654			4
	5	15	15.33	1.345			1
	6	11	13.36	4.522			7
	7	30	14.77	2.541			3
	8	21	13.67	3.055			9
	9	11	14.62	3.218			6
	Total	243					-

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Table 3.ANOVA results for SWI about E-learning based on Teachers' view

Variable	Schools	Frequency	Mean	SD		Sig	Rank
Soft Ware Infrastructures (SWI)	1	115	14.52	4.1	4.7	0.00	8
	2	7	15.00	3.9			7
	3	15	16.13	4.6			5
	4	9	16.55	4.2			3
	5	15	18.20	1.8			2
	6	11	15.45	3.3			6
	7	30	18.33	2.1			9
	8	21	16.28	4.1			1
	9	11	15.69	4.0			4
	Total	243					-

Table 4.ANOVA results for LR about E-learning based on Teachers' view

Variable	Schools	Frequency	Mean	SD	f	Sig.	Rank
Logistic Resources (LR)	1	115	26.99	6.199	12.4	0.001	7
	2	7	23.85	3.933			8
	3	15	30.53	6.988			6
	4	9	30.77	7.965			5
	5	15	35.06	3.614			2
	6	11	33.45	5.802			3
	7	30	35.50	2.649			1
	8	21	33.33	5.677			9
	9	11	29.88	6.712			4
	Total	243					-

Table 5.Especial Value, per cent of Variance and Cumulative per cent of factors

Factor	Especial Valu	per cent of Varian	Cumulative per cent of factors
First	5.16	57.32	57.32
Second	1.19	13.22	70.54

Table 6.Factor Analysis of Variables effecting on effectiveness e-learning based on Teachers' view

Effecting factors on E-learning	First Factor Correlati	Second Factor Correlation
Staffs' Commitment and responsibility	0.825	-
Soft Ware Infrastructures	0.821	-
Logistic Resources	0.785	-
E-Content	0.770	-
Hard Ware Infrastructures	0.762	-
Financial resources	0.674	-
Staffs' Attitude towards learning	-	0.916
Culture Creating	-	0.890
Staffs' Professional Skills	-	0.569

7. Figure

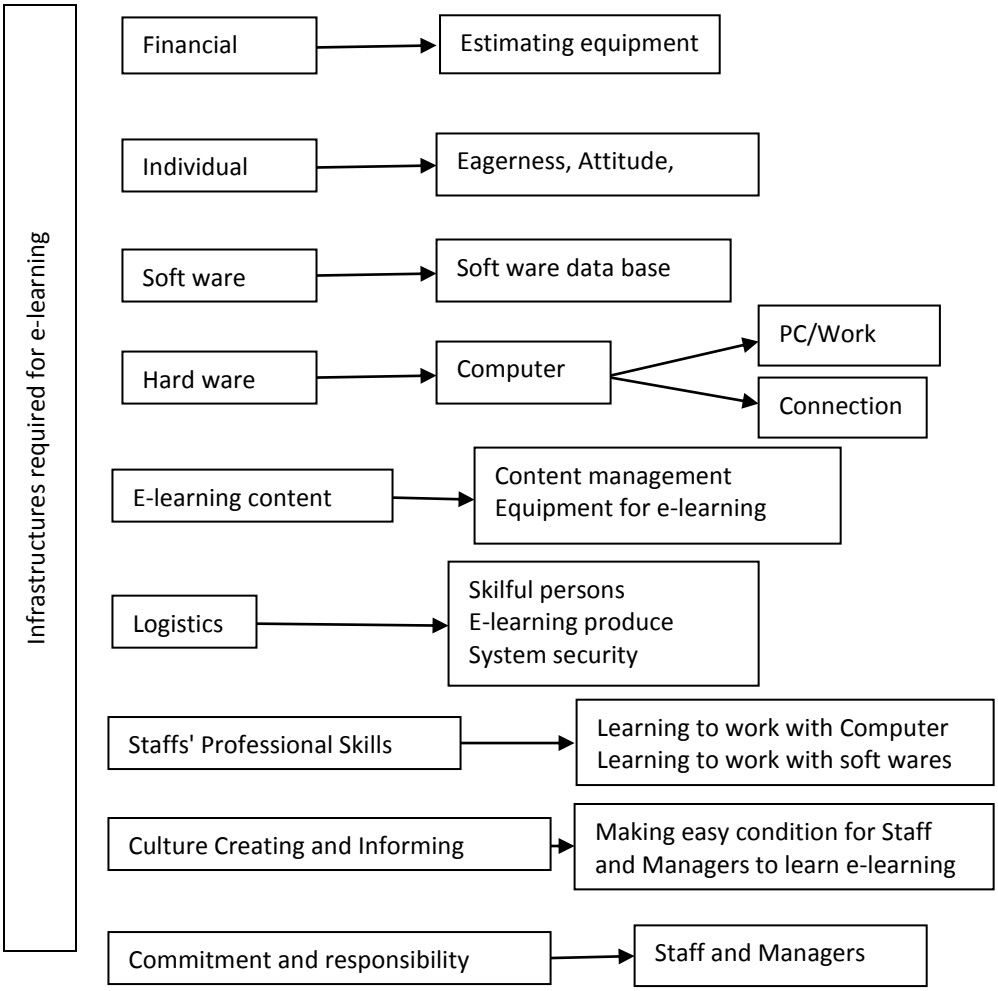

Figure.1. Infrastructures required for E-learning

8. Discussion

The third millennium is known as the digital revolution and the digital literacy is said to be an index of progress in today societies. Thus, people is to gain the best opportunity for making themselves improve via the least time and cost. E-learning and smart schools have been introduced as the primary tool for individuals specially students to start with. Some factors must be considered if any society and students of that society would like to be known as literate including e-learning goals and strategies.

9. Conclusion

E-learning is a kind of distance-cantered education in which computer networks (specifically internet), e-lesson content, and educational management soft wares along with teachers, or it is better to say facilitators, are generally used for learning process. In this kind of education, lesson contents are delivered to the learners through networks and in electronic courses. E-learning can bring a condition for the learners to get what he/she needs and therefore, it makes possibility for him/her to regulate the specific time for himself/herself to solve problems. This paper and the results showed the teachers' view about e-learning and some factors by which schools can make themselves ready to face challenges and constraints.

10. Recommendations

Education system is the best place for implementation of e-learning since students are ready to accept any newly global change. Sometimes parents are complaining about the wasting time of their children surfing in net while socially virtual networks are not necessarily bad if they are used appropriately and properly. The task of parents is to make their kids be aware of how-to-use networks and teachers as well. TV. Networks and those systems ruled by government should cooperate to make the best bed for any required change if statesmen would like to witness their countries' progress.

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