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Survey and Comparison of the Management Factors Affecting Teaching-Learning Process in Smart and Ordinary Schools of Bojnourd

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Abstract

The purpose of this paper is comparing the role of Principal on teaching - learning process in ordinary and smart schools of Bojnurd (the center of north-eastern province of Iran). This type of survey and the questionnaire as a data collection tool is a cross-sectional study. This study was based upon descriptive-measuring model and due to its objective was categorized as functional research group. The population of the study included the Principals, men and women of middle school and high schools in Bojnourd during Spring-2013. Cochran's formula was used for determining the sample size and the stratified random sampling method was used. It was found that the reliability obtained was high. The data were analyzed using descriptive statistics for the analytical tests such as correlation analysis, analysis of variance and Tukey test. The statistical analyses used are SPSS and Microsoft Excel. The results of this study indicated that technology is a tool and efficient application of any technology kinds comes from thought, culture and social relations deeply.

Keywords: smart schools, teaching - learning process, information and communication technology and School administrators

Introduction

Since Principal is powered by the development of human resources in the educational system, they are the beginning of great changes in science and the future. Therefore, it is essential that the dimensions and angles of the education system to be Managing more accurately in order to move towards smart schools. The Management s' skill in using ICT as an important factor to be considered is the use of this technology in schools (Soltani, Aliyev2012).

According to WHOM data in 2009, the proportion of traditional education and modern education based on technology of information and communication is 25 to 75 percent (ZARE, 2009). Education experts believe that the traditional methods and subject-based teacher-centered instruction the goal of which is remembering and filling the mind and relying on reserved does not respond to the educational needs (Hagi Zade, 2006). There are two different approaches on the impact of ICT on education (schools in particular): some believe that it is simply a gradual transfer of new technologies into traditional curriculum and actually making it more efficient, and causing faster access to the information so that log into information technologies will transform not only education but also will strengthen the conservative tradition leads. Another approach believes that logging in ICT in schools makes fundamental changes in education and tools. From this perspective, the information technology is transcending the boundaries of traditional education system. The advantage of this approach over traditional methods of teaching information technology is revealed. But it is important to note that in addition to helping to create a revolution in the education of ICT we must try to change the culture of teaching and learning.(Mashayekhi,2007)

Smart school

Smart school is a school-based management which controls technologies and computer networks as well as the content of the e-lessons, and is also an intelligent monitoring and evaluation system (Griffin, 2010).Smart school is designed to create an environment of teaching and learning system of school management and to educate students. In fact, the

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use of information technology in higher education in the country beside the emphasis on thinking skills and providing an optimal learning environment, teaching school are strategies and policies of smart school students. Numerous studies show that the media tool neither improves nor negatively impacts learning when compared to the same teaching strategy in the classroom (Bernard *et al.*, 2004; Clark, 1983, 1991).. Emphasis on thinking skills, learning strategies, and teaching environments provide the guidelines of smart schools.

Attitude towards Technology

Today the administrative decisions in School and learning environment make the efficient using of existing technologies. they, try to upgrade imagination of student to their abilities and capabilities, To fulfill this role, appropriate new methods of skills are required to enable computer application as PC users and their effectiveness in decision-making(Tusi,2009).

Research Question

The local community and subculture views on community of information technology can be amongst issues affecting the development of smart schools which needs to be considered. The researchers plan to find new problems in schools in deprived areas with their own culture and try to find answers to this question:

-Is there a difference between use of technology, achievement and creativity among smart and ordinary school's student?

The researchers tried to consider cases that have been counted and the results obtained after doing this project in Iran, and the findings were applied in the newly established State which is limited in IT infrastructure and the lack of Principals' belief in the usefulness of the training program.

Methodology

The study is a kind of Research survey and research's specific time, a cross-sectional study. The data collection tool is a questionnaire made by the researcher. Its validity and reliability have been confirmed by experts and professionals, its alpha coefficients scores is between 0.69 & 0.8. The questionnaires is based on Likert Scale that included anthropometric scaling method to common belief, the responses of 5 items on a scale of very high, high, medium, low, very low to measure the respondents attitudes. The population of this research project includes school teachers and girls and boys of middle and high schools in Bojnourd. To achieve the objectives of the frequency of Cochran's formula for determining the sample size of the method stratified random sampling was used. The population of this study was the Principal of smart and normal schools of middle and high schools in Bojnourd during spring of 2013.

Results

Hypothesis 1: The use of technology has a significant relationship with job attitudes

Table 1: Descriptive Statistics

	Number	mean	Standard deviation	Minimum	Maximum
Use of Technology	89	3.4270	1.09635	1.00	5.00
Job outlook	89	4.0337	.54308	2.00	5.00
Attitudes to Technology	89	4.3121	.58240	2.22	5.00

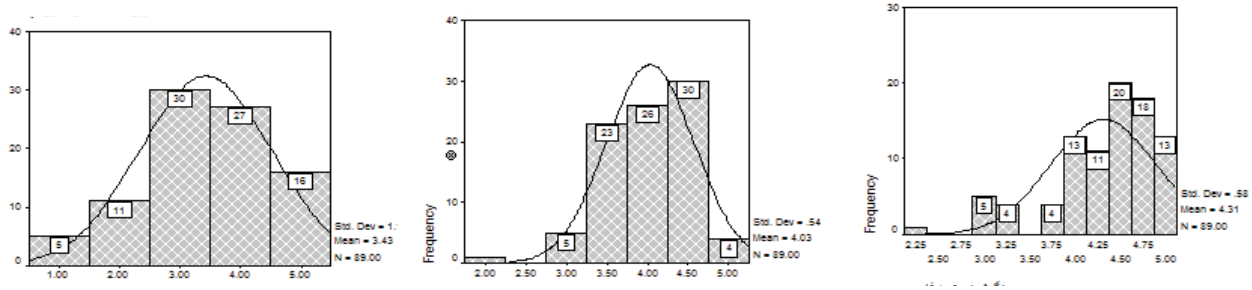

Figure 1: Histograms of the distribution in terms of the variables

Table 2: Pearson correlation test between job attitudes and the use of technology

		Job outlook
Use of Technology	Pearson	0.065
	significant	0.547
	Number	89

Note that the minimum amount is more than 0.05 significance level test. Therefore, the assumption of relationship between use of technology and the job outlook was rejected .

Hypothesis 2: The Attitudes to technology has a significant relationship with job attitudes

Table 3: Pearson correlation test between job attitudes and the Attitudes to technology

		Attitudes to Technology
Job outlook	Pearson	0.718
	significant	0.000
	Number	89

Note that the minimum amount is less than 0.05 significance level test; Pearson correlation is confirmed. The Job outlook has a significant relationship with attitudes toward technology. It can be said with regard to the correlation between direct and strong intensity. That is the more the positive attitude towards the use of IT technology, the more the Job outlook.

Hypothesis 3: Principals' Use of Technology in the various smart schools is significant.

Regarding the fact that the amount of the least meaningful level of f-test is less than 0.05, the assumed equality of use of ICT in schools has been rejected; so it can be said that the amount of use of technology at different schools show significant differences. To study the types of the difference, the Tukey test has been applied.

The Tukey interpreted test reveals that the use of IT scale is meaningful between schools which have between 6-12 computers and schools which have fewer than 6 computers. And the rate of computers use among schools which have more than 12 computers is different with the two other groups.

Table 4: Principals' Use of Technology in the various smart schools is significant

principals' use of IT technology	Number	Mean	Standard deviation	F-Test	P
Less than 6 computers (non-smart)	12	2.5000	1.24316	5.481	.006
6to 12 computers (semi-smart)	30	3.6000	.81368		
More than 12 computers (smart)	47	3.5532	1.11917		
Total	89	3.4270	1.09635		

Table 5: Tukey test of use of technology in Smart School

Level of intelligence	N	Subset for alpha = 0.05	
		1	2
6 to 12 computers (semi-smart)	30		3.6000
More than 12 computers (smart)	47		3.5532
Less than 6 computers (non-smart)	12	2.5000	
Significant		1.000	0.988

Hypothesis 4: Job Attitudes of principal in different levels of IT skill is significant.

Regarding the amount of the lowest significance level being more than 0.05 and F-test; the assumption of equality Job Attitudes of principal in different levels of IT skill is not rejected. it can be said that there are not significant differences in the rate of job attitudes of principal with different levels of IT skill.

Hypothesis 5: principals' use of technology and Job Experience is significant.

Regarding the fact that the amount of the least meaningful level of f-test is more than 0.05, the assumed equality of principals' use of technology and Job Experience is not rejected. That mean, is not the relationship between principals' use of technology and their Job Experience.

Table 6: Descriptive Statistics and Analysis of Variance Table of the rate of job attitudes of principal with different levels of IT skill.

Job Attitudes	Number	Mean	Standard deviation	F test	P
Related to information technology	7	4.0952	.43946	.148	.863
ICDL holds	43	4.0543	.47936		
Lack of expertise in IT	39	4.0000	.62944		
Total	89	4.0337	.54308		

Table 7: Descriptive Statistics and Analysis of Variance Table intelligent approach to technology in schools

principals' use of technology	Number	Mean	Standard deviation	F test	P
Less than 10 years	2	4.5000	0.70711	2.161	0.121
10-20 years	25	4.5000	0.98826		
More than 20 years	62	3.6800	1.12187		
Total	89	3.4270	1.09635		

Hypothesis 6: principals' attitude to technology with different Job Experience is significant.

Regarding the fact that the amount of the least meaningful level of f-test is more than 0.05, the assumed equality of principals' attitude to technology and Job Experience is not rejected. That mean, attitude to technology with different Job Experience is not significant.

Table 8: Descriptive Statistics and Analysis of Variance Table intelligent approach to technology in schools

principals' attitude to technology	Number	Mean	Standard deviation	F test	P
Less than 10 years	2	3.8889	0.94281	0.535	0.588
10-20 years	25	4.3200	0.56685		
More than 20 years	62	4.3226	0.58240		
Total	89	4.3121	0.58240		

Hypothesis 7: principals' use of technology in different Field of Study is significant.

Regarding the fact that the amount of the least meaningful level of f-test is more than 0.05, the assumed equality of principals' use of technology in different Field of Study is not rejected. That mean, is not significant principals' use of technology in different Field of Study.

Table 9: Descriptive Statistics and Analysis of Variance Table intelligent use of technology in different Field of Study

principals' use of technology	Number	Mean	Standard deviation	TestF	significant
management	30	3.3667	1.15917	0.535	0.588
IT	9	3.7778	1.09291		
other	50	3.4000	1.06904		
Total	89	3.4270	1.09635		

Hypothesis 8: principals' attitude to technology in different Field of Study is significant.

Regarding the fact that the amount of the least meaningful level of f-test is more than 0.05, the assumed equality of principals' attitude to technology in different Field of Study is not rejected. That mean, principals' attitude to technology in different Field of Study is not significant.

Table 10: principals' attitude to technology in different Field of Study is significant.

principals' attitude to technology	Number	Mean	Standard deviation	TestF	significant
management	30	4.4593	0.42157	1.080	0.344
IT	9	4.3333	0.68041		
other	50	4.2200	0.63749		
Total	89	4.3121	0.58240		

Conclusion

The results of this study indicated that technology is a tool and efficient application of any technology kinds comes from thought, culture and social relations deeply. Therefore, we require improved approaches, review educational policies, reorganize the content, and improve human resources, effective curriculum design and development of cultural criteria to provide coexistence with the new technology, particularly in developing education in Bojnord.

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