

A Study on The Attitudes of Students, Instructors, and Educational Principals to Electronic Administration of Final-Semester Examinations in Payame Noor University in Iran

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ABSTRACT

The aim of this study was to investigate the attitudes of students, instructors, and educational principals to electronic administration of final-semester examinations at undergraduate and post-graduate levels in Payame Noor University in Khuzestan. The statistical population of this study consisted of all educational principals, instructors, of students of Payame Noor University in Khuzestan. The sample of the study consisted of 19 principals, 46 members of faculties, and 296 students. The instrument of the research (material) was a questionnaire that was designed by the researcher of this study. This research was a descriptive-survey study. The results showed that the attitudes of students, instructors, and educational principals to electronic administration of examinations are positive.

Keywords: Feasibility; electronic examination; Payame Noor University; information technology

INTRODUCTION

Today electronic examinations are considered as an effective strategy to replace the official assessment methods in the higher education system. Ayo et al (2007, p.126) defines electronic examination as a system in which the test is administered by a network or internet. The definition presented in Wikipedia is a definition of electronic evaluation. However, it is related to electronic examination. In its general sense, using information technology in every activity related to evaluation is called electronic evaluation. Using electronic examination is a result of potentials which can be found in internet and intranet. According to El Emary (2006), as more and more universities are connected to internet, and students and instructors learn how to work in an online environment, the potentials of learning by internet are better understood. Web is a tool that can help teachers to create an exiting learning environment and enhance positive competitions among learners (ibid, p.1715). Web can be used for electronic administration of examinations. Many instructors have emphasized the usefulness of electronic administration of examination. Electronic examinations were introduced to solve the problems of paper-and-pencil ones. Electronic administration of examinations can remove all human errors that might occur in paper-and-pencil tests. It gives students the opportunity to see the results immediately. In this way, we do not need to collect the papers across the country and transfer them from one location to another one. In today

world, examinations are administered by internet. Also, the possibility of cheating has been reduced.

Online administration of examinations can be a good solution for structural problems. According to Chiranji et al. (2011), online administration of tests has several advantages, such as accessibility at every time and at a favorite place, rapid feedback, and efficiency.

This point is especially important for students of Payame Noor University, because most students attend these universities in order to have access to distance education without continuous presence at university (Omidian, 2010). Most of Payame Noor University students are married and employed or live in places far from university. Therefore, online administration of test can reduce that type of stress which is associated with time and space of test administration.

A study conducted by a research institute in US has shown that information and communication technology has improved educational systems in developing countries and it can be an effective tool for the development of educational systems in the third millennium. The results of this study have shown a positive correlation between using information technology and level of leaning among students (Brown, et al, 2008).

METHODOLOGY

This study was a descriptive-survey research. The statistical population of this study consisted of all faculty members, students, principals and their deputies in Payame Noor University in Khuzestan in 2013-2014. The statistical population of undergraduate students consisted of 28943 students. The whole number of faculty members was 41. The number of principals of universities and their deputies was 19.

In this study, multistage cluster sampling was used. Firstly, two areas in north and the center of Khuzestan were selected. Then, Payame Noor University of Ahvaz was selected from central area. Payame Noor University of Dezful, Shooshtar, Shoosh, and Andimeshk were selected from northern area of Khuzestan.

In the next stage, because the number of undergraduate students must be 300 (according to Morgan table), students of each university were selected by stratified sampling.

As the number of faculty members and principals of universities and their deputies was small, the whole population was taken as the sample. The instrument (material) of the study was a questionnaire that was designed by the researcher of the study. The questions were about the advantages of electronic administration of examinations and their obstacles. A Likert scale was used in this questionnaire.

To determine validity, Pearson formula was used to find the correlation between subscales and the whole score of the questionnaire for students.

The whole score of questionnaire (advantages of electronic administration of examination) for students, instructors, and principals were 0.65, 0.68, and 0.60 respectively.

To calculate the reliability of questionnaire, Cronbach α formula was used. The obtained values (questionnaire regarding the feasibility of electronic administration of final-semester examinations in Payame Noor University of Khuzestan) for students, instructors, and principals were %80, %73, and %74 respectively.

RESULTS

Research Question

What advantages of electronic administration of final-semester examinations are in open universities? This question was addressed based on the views of students, instructors, and principals. These views were investigated separately.

Table: 1
Percentage and frequency of participants who answered the question about advantages of electronic administration of examinations (based on students' views)

rankin	Standard deviation	mean	answer					index	questions	No
			Very high	high	medium	low	Very low			
2	0/64	2/80	0	17	223	36	20	frequency	Reducing the stress which is related to the length of the way	1
			0	5/7	75/3	12/2	6/8	percentage		
1	0/83	2/90	14	60	177	29	30	frequency	Reducing the stress which is related to examination	2
			4/7	1/3 20	59/8	9/8	10/1	percentage		
3	0/96	2/70	0	42	107	110	23	frequency	Improving students' performance on examinations	3
			0	1/2 14	36/1	37/2	7/8	percentage		
6	0/69	2/34	0	15	94	164	23	frequency	Enhancing the effectiveness of teaching	4
			0	5/1	31/8	55/4	7/8	percentage		
4	0/69	2/65	0	15	189	68	24	frequency	Efficiency at the time and place of examination	5
			0	5/1	63/9	23	8/1	percentage		
5	0/75	2/43	0	25	102	147	22	frequency	Reducing the costs	6
			0	8/4	34/5	49/7	7/4	percentage		

As can be seen, question 2 (Reducing the stress which is related to examination) had the highest mean (2.90) and question 4 (Enhancing the effectiveness of teaching) had the lowest mean based on the views of students.

Table: 2
Percentage and frequency of participants who answered the question about advantages of electronic administration of examinations (based on instructors' views)

ranki ng	Standar d deviation	mean	answer					index	questions	No.
			Very high	high	medium	low	Very low			
4	0/38	2/95	0	2	35	4	0	frequency	Reducing the stress which is related to the length of the way	1
			0	4/9	85/4	9/8	0	percentage		
2	0/43	3/24	0	10	31	0	17	frequency	Reducing the stress which is related to examination	2
			0	24/4	75/6	0	41/5	percentage		
5	0/86	2/82	0	2	6	16	0	frequency	Improving students' performance on examinations	3
			0	4/9	14/6	39	0	percentage		
7	0/48	2/34	0	0	14	27	0	frequency	Enhancing the effectiveness of teaching	4
			0	0	34/1	65/9	0	percentage		
3	0/67	3/00	1	6	26	8	0	frequency	Efficiency at the time and place of examination	5
			2/4	14/6	63/4	19/5	0	percentage		
6	0/50	2/43	0	0	18	23	0	frequency	Solving the problems of learning	6
			0	0	43/9	56/1	0	percentage		
1	0/59	3/51	2	17	22	0	0	frequency	Reducing the costs	7
			4/9	41/5	53/7	0	0	percentage		

As can be seen, question 7 (reducing the costs) had the highest mean (3.51) and question 4 (Enhancing the effectiveness of teaching) had the lowest mean (2.34) based on the views of instructors.

Table: 3
Percentage and frequency of participants who answered the question about advantages of electronic administration of examinations (based on principals' views)

ranki ng	Standard deviation	mediu m	answer					index	questions	No.
			Very high	high	medium	low	Very low			
2	0/94	3/01	2	2	9	6	0	frequency	Reducing the stress which is related to the length of the way	1
			10/5	10/5	47/4	31/6	0	percentage		
4	0/51	2/47	0	0	9	10	0	frequency	Reducing the stress which is related to examination	2
			0	0	47/4	52/6	0	percentage		
3	0/66	3/00	0	4	11	4	0	frequency	Improving students'	3

			0	21/1	57/9	21/1	0	percentage	performance on examinations	
5	0/47	2/31	0	0	6	13	0	frequency	Enhancing the effectiveness of teaching	4
			0	0	31/6	68/4	0	percentage		
1	0/47	3/31	0	6	13	0	0	frequency	Reducing the costs	5
			0	31/6	68/4	0	0	percentage		

As can be seen, question 5 (reducing the costs) had the highest mean (3.31) and question 4 (Enhancing the effectiveness of teaching) had the lowest mean (2.31).

DISCUSSION AND CONCLUSION

The results showed that based on the views of students, the electronic administration of final-semester examination has low advantages. Based on Chi squared test (goodness of fit), the value of this test is 168.33, degree of freedom is 2. Level of significance was 0.001 and level of error was 0.05.

Therefore, there is a significant difference between frequencies and the result of test is meaningful.

All in all, the results show that base on the views of students, instructors, and principals, electronic administration of examinations has low advantages. This finding is consistent with the findings of a number of other studies. According to Chiranji et al. (2011), online administration of tests has several advantages, such as accessibility at every time and at a favorite place, rapid feedback, and efficiency. Yu et al. (2003) believe that the time of electronic test administration can differ according to the field of study. This point is especially important for students of Payame Noor University, because most students attend these universities in order to have access to distance education without continuous presence at university (Omidian, 2010).

Most of Payame Noor University students are married and employed or live in places far from university. Therefore, online administration of test can reduce that type of stress which is associated with time and space of test administration. But, the electronic administration of examinations is faced with some obstacles and limitations in the educational systems. Cheating is one of the major problems of such test administration. Test-takers can copy, exchange answers, and search in the internet to find the right answers.

Although various algorithms and software programs have been designed to prevent cheating in these tests (Long et al. 2003; Chiranji et al, 2011), using such tools is expensive for planners and students. So, their use is faced with the problem of feasibility (Clusky et al, 2008). Many experts and researchers believe that paper-and-pencil examinations have a negative impact on the performance of students. According to Hosseini (2007), because of content and structural problems such as questions, limited time, and limited space for test administration, these examinations create a stressful situation for students.

According to a study conducted by Cheng (2005), the national centralized examinations are administered in multiple-choice form that limits students' learning, because they have to study only those subjects which are included in the test and also they have to learn techniques of success in multiple-choice tests. Oxenham (1984) believes that this type of

examination makes teaching and learning monotonous and boring for teachers and learners. Kamyab (2008) concluded that examinations themselves have become an end, rather than a means for achieving the general goals of education. This has made the educational systems test-based. Syllabi, teachers, and teaching and learning processes focus only on the tests.

Also, limitations of time and space of test administration always create some problems, such as temporary forgetting of subjects, stress, and weak performance of the test-takes. According to Rockwell et al (2000), only %26 of instructors have knowledge about the methods of electronic education and used them. Around %40 of instructors believed that using electronic education can improve quality of education among students. They believed that within 5 years, they have to use these methods besides their traditional methods of education.

%34 percent of instructors said that they have no positive attitude toward electronic education and they do not use these methods. The majority of instructors believed that the reason behind the unpopularity of electronic methods among instructors is the lack of necessary rudiments and equipments.

To explain this finding, we can say that students, instructors, and principals believe in the usefulness electronic administration of test and it can reduce the stress caused by examinations among students.

Therefore, if the learning environments are designed on the basis of meticulous knowledge about the capabilities of information and communication technology, they can enhance the learning of subjects and some other skills, such as problem solving, creativity, planning, management, and social relations. (Weller, 2005, cited in Khalkhali et al, 2011).

Because of growing demands for learning specialized knowledge, we need to change the traditional methods of teaching and learning.

We need to learn how modern technologies can help us to improve learning among students and to give more responsibility to students throughout the process of learning.

Many teachers believe that changing the approaches to teaching and learning and using modern information technology in teaching methods can improve the educational systems and satisfy the communicational needs of a modern society (Khalkhali et al. 2011).

SUGGESTION OF THIS STUDY

- Using information and communication technology and making it one of the priorities in universities
- Training human work force in information and communication technology
- Teaching students, instructors, and principles how to use these technologies
- Providing people with necessary information and developing a clear planning for policy-making
- Designing educational courses in electronic administration of examinations
- Holding seminars, workshops, and training courses and designing brochures and handbooks to offer the necessary information and knowledge for electronic administration of examinations
- Developing the culture of digital world and knowledge about computer by holding seminars, workshops, and educational courses

- Preparing the necessary equipments and rudiments
- Experimental administration for at least two semesters
- Creating a board or committee for electronic administration of examinations
- Encouraging decision-makers and members of faculties to administer examinations electronically
- Allocation of sufficient budget for electronic administration of examination, and also training experts who can use software programs and hardware equipments
- Improving organizational culture and encouraging people to use modern technologies as well as fighting against biases and resistance to technology change

SUGGESTIONS FOR FUTURE RESEARCH

- Studying the factors which might have an impact on electronic administration of examinations and finding new ways for improving them in other provinces
- Studying the obstacles which prevent using information technology based on the views of students and instructors
- Conducting extensive and applied studies
- Studying other aspects of feasibility

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