

Evaluation of the Effectiveness of Educational Programs at Islamic Azad University, Kermanshah Branch

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ABSTRACT

The world today is changing. There are every day innovations in the economy, changes in production or innovation in services. Thus in the changing world today, nobody can adjust to the nearby environment by relying on his knowledge in the formal education a system. Therefore, according to the philosophy of regular education, the humans should always have dynamic and developing information and be informed about the newest findings related to their life and profession in every stage of life. In such conditions, most of the organizations are seeking to find a solution to adapt to these conditions. The solution offered by most of the authorities is education and remediation of human resources. The aim of the present study was to evaluate the effectiveness of educational programs at Islamic Azad University, Kermanshah branch from the viewpoint of the staff and managers in terms of the services and indices of human resources. This study was a descriptive survey and the statistical society comprised of the staff at Islamic Azad University, Kermanshah branch. The statistical sample included 125 personnel out of which 92 questionnaires were completed. The theoretical data were collected via library and the data were obtained from the researcher-made questionnaire. Data were analyzed by SPSS software. The results obtained indicated that the educational programs at Islamic Azad University, Kermanshah branch improved the services and indices of human resources and had favorable effects, generally.

KEYWORDS: organizational change, evaluation, in service training, educational program, evaluation of educational program.

INTRODUCTION

Nowadays, senior managers and leaders have concluded that the individuals' skills and capacities for change are key factors in increasing the growth rate (Karp, 2004). Thus, training the members of the organization is essential to develop their competencies in fulfilling new responsibilities that are resulting from the organizational changes (Ahouz, 2004). Therefore, in service training in organizations is necessary. In service training is defined as a systematic attempt to coordinate the wishes, interests, and future requirements of the individuals in the form of the responsibilities they are expected to fulfill, and as a means to create change in the organization (Dolan & Schuler, 2001).

The first motive for education and development is creating change. Developments in technology and science make many skills old and increase the need for the creation of new technology, so training the managers and personnel is an important issue (Hajikarimi, 2000). Accordingly, organizations find out that individuals can account for the challenges of change merely through acquiring the power of instinct and regular learning (Guns, 1978).

Statement of the problem

Generally, to measure the effects of an educational program, it is necessary to evaluate its performances annually to discover and correct the possible deviations based on the objectives of the program. Various organizations spend enormous sums of money to teach specific skills without any appropriate feedback system (Baker, 1999). Training courses are held for the personnel every year. It is expected that these courses lead to the qualitative enhancement of manpower by employing frequent human and financial resources. The question is, however, whether these courses are fundamentally held, and whether they create the required changes in the organization, given the high costs imposed and many facilities used. The evaluation of these courses and measurement of their impact are necessary to discover the administration style and analyze the obtained results. In this study, no specific model was used, but different models of deductive educational evaluation were applied to test the hypotheses and variables. For instance, Kirkpatrick's model was used to analyze the effect of training on production, improving the quality, decreasing the work accidents, etc. Given the importance of training in organizations and the effect that empowering the human resources has in organizations, the present study

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investigated the effectiveness of educational programs in Islamic Azad University, Kermanshah branch from the viewpoint of the personnel and managers in human resources department.

Therefore, previous and in service educational programs cannot be considered valuable and effective, unless the given programs create basic changes in the behavior, skill and expertise of the participants in the educational program so that they can be effective in the real working environment. Certainly, it would not be easy to discover the results without complete and effective evaluation. In this study, with referd to the importance of education in organizations and the impact that the capability of human resources has in organizations, the effectiveness of educational programs from the viewpoint of the personnel and managers at Islamic Azad University, Kermanshah branch was evaluated by the researcher as a third factor.

Significance of the study

Certainly, a considerable part of success can be attributed to planning, organization, and internal and external relationships, which is the result of the experts' attempts as well as manpower. Moreover, the management style is essential in this significant and strategic area. Thus, focusing only on the personnel and managers' skills is contrary to the futuristic view and proper planning to advance the developing industry. The managers who are interested in the company's excellence should account for fostering the personnel and managers' skills in their agenda. The most significant method to train future managers is the systematic in survive training both theoretically and practically. Also, given the policies of this organization in human resources, it is important to train the necessity of evaluating the educational programs. Thus, the importance of evaluation is using the results as the feedback of educational programs to create the basic and required changes in the programs.

Objectives of the study

Main objective 1: analysis of the effect of educational programs on improving services at Islamic Azad University, Kermanshah branch

1-1. Determining the effect of educational programs on increasing the quality of the services at Islamic Azad University, Kermanshah branch

2-1. Determining the effect of educational programs on decreasing the direct costs of services at Islamic Azad University, Kermanshah branch

3-1. Determining the effect of educational programs on decreasing the waste materials at Islamic Azad University, Kermanshah branch

4-1. Determining the effect of educational programs on decreasing the time spent on providing services at Islamic Azad University, Kermanshah branch

5-1. Determining the effect of educational programs on improving the methods of doing tasks at Islamic Azad University, Kermanshah branch

6-1. Determining the effect of educational programs on decreasing the repair and maintenance costs at Islamic Azad University, Kermanshah branch

7-1. Determining the effect of educational programs on improving the quality of services at Islamic Azad University, Kermanshah branch

Main objective 2: analysis of the effect of educational programs on the indeces of human resources management at Islamic Azad University, Kermanshah branch

2-1. Determining the effect of educational programs on decreasing the personnel movement at Islamic Azad University, Kermanshah branch

2-2. Determining the effect of educational programs on decreasing the personnel desertion at Islamic Azad University, Kermanshah branch

2-3. Determining the effect of educational programs on increasing the personnel's job satisfaction at Islamic Azad University, Kermanshah branch

2-4. Determining the effect of educational programs on the personnel's organizational commitment at Islamic Azad University, Kermanshah branch

2-5. Determining the effect of educational programs on the possibility of replacing experts in emergency conditions at Islamic Azad University, Kermanshah branch

2-6. Determining the effect of educational programs on the personnel's cooperation at Islamic Azad University, Kermanshah branch

Variables of the study

a) Dependent variables

In this study, dependent variables included the factors related to providing services (services, direct costs of services, waste, the time spent on providing services, method of performing the tasks, providing service, repair and maintenance cost, quality of services) and indeces of human resourses (job satisfaction, personnel

movement, organizational commitment, tendency to leave the office, personnel cooperation, and replacing experts in emergency cases).

b) Independent variables

The independent variable in this study was the educational programs at Islamic Azad University, Kermanshah branch.

Hypotheses or research questions

Main hypothesis 1: performing educational programs at Islamic Azad University, Kermanshah branch led to the improvement of providing services

- 1-1. performing educational programs at Islamic Azad University, Kermanshah branch led to increasing services
- 1-2. performing educational programs at Islamic Azad University, Kermanshah branch led to decreasing the costs
- 1-3. performing educational programs at Islamic Azad University, Kermanshah branch led to decreasing the waste materials
- 1-4. performing educational programs at Islamic Azad University, Kermanshah branch led to decreasing the time spent on providing services
- 1-5. performing educational programs at Islamic Azad University, Kermanshah branch led to improving the methods of doing tasks
- 1-6. performing educational programs at Islamic Azad University, Kermanshah branch led to decreasing the repair and maintenance costs
- 1-7. performing educational programs at Islamic Azad University, Kermanshah branch led to improving the quality of services

Main hypothesis 2: performing educational programs at Islamic Azad University, Kermanshah branch led to improving the indexes of human resource's management

- 2-1. performing educational programs at Islamic Azad University, Kermanshah branch led to decreasing the personnel movement
- 2-2. performing educational programs at Islamic Azad University, Kermanshah branch led to decreasing the personnel desertion
- 2-3. performing educational programs at Islamic Azad University, Kermanshah branch led to increasing the personal's job satisfaction
- 2-4. performing educational programs at Islamic Azad University, Kermanshah branch led to increasing the personnel's organizational commitment
- 2-5. performing educational programs at Islamic Azad University, Kermanshah branch provided the possibility of replacing the experts in emergency conditions
- 2-6. performing educational programs at Islamic Azad University, Kermanshah branch led to improving the personnel's cooperation.

REVIEW OF LITERATURE

In a study, Esfahani (2004) investigated the effect of in service training on the efficiency of the learners at Jihad Sazandegi in Isfahan during 1987-1992. The findings indicated that in service training had a positive effect on the personnel in fulfilling their responsibilities which was efficiently related to the increase in the personnel knowledge. Also, inservice training was compatible (63%) with educational needs of Jihad Sazandegi and was effective in the creativity, innovation and cooperation of the staff.

Bazar Jazayeri (2002) in a case study titled "the analysis and evaluation of the effectiveness of educational programs held in Iranian national steel company" examined the effectiveness of educational programs aiming to evaluate the organizational training programs held during 1996-2001. The total of 87 staff participated in the study. The research questions were classified into three parts: a) the effect of education and its related factors (increasing the job-related knowledge, improving attitude, increasing job skills), b) strengths and weaknesses of educational programs, and c) suggestions to increase the effectiveness of educational programs of the company. The results showed that, although the educational programs were not sufficiently effective, the statistical analyses revealed that the effectiveness of training at the steel company was significantly (60%) higher than the hypothetical mean (maximum score of effectiveness).

Ebili (2004) in a study titled "evaluation of the quality of educational courses of the institutes providing educational courses to Iran Khodro Company" investigated the quality of training programs provided to Iran Khodro Company in 2000 and 2001. The findings indicated that the services provided by the educational institutes were favorable.

Phelshman et al. (1995) examined the effects of managerial education on the managers in Harster international company. They taught the managers to behave more conservatively and. Their findings indicated

that the education based on internal criteria did not yield stable results, but it was effective in the case of external criteria such as absenteeism, accidents, complaints, job circulation, and evaluation by authorities.

Washington et al. (2004) in their study titled "evaluation of the effect of educational programs on the perception of internal job conditions" analyzed the effect of educational programs on the satisfaction and self-esteem of the food industry staff in Minnesota and Rozenberg. The results revealed that the educational programs did not have any effect on increasing the positive feelings of the personnel about their jobs or their self-esteem.

In another study (2005) in Donald & Echisen (A&D) company in England conducted on the success rate of educational programs by the company's researchers, it was reported that the educational programs increased the sale by 20% through evaluation and planning the sales programs, and decreasing the personnel movement from 12% to 35% via secured educational programs.

Muir & Schwartz (2009) in a survey titled "the analysis of academic education in non-academic organizations" investigated the effect of in service training on the skills of the personnel in their organizations. The statistical society of the research comprised of 189 graduates from California University from 1973 to 2008. The results of the study were indicative of the difference between the acquired skills as a result of university education and the skills acquired in the workplace (in service education). Further, the results indicated the importance of teaching the required job skills to create balance among the staff's abilities and needs of the organization.

In his study, Galanuo (2009) designed a model to evaluate the effectiveness of educational programs. The statistical society of the study included 190 middle managers of Greek banks on whom the given model was applied. Given the importance of education in organizations and negligence of most of the studies regarding the evaluation of the output and quality of educational programs, the researcher designed a comprehensive model using 6 evaluation levels. They included: reflections, job-related behaviors, job performance, performance of the organizational system, and social effects. The results of the study indicated the model's appropriacy and functionality. Also, the findings highlighted the significance of the evaluation of the effectiveness of the output and quality of the educational programs and considered the given model to be proper for the evaluation of educational programs.

Boothby et al. (2010) in their study title "the analysis of the effect of teaching new technology on improving the staff's performance" examined the relationship between teaching new technology and the staff's efficiency. They argued that the companies that use new technologies should teach their personnel how to use the new technologies. The results of their study showed that technical training affected production, quality and procedures of doing the tasks and consequently increased efficiency, on the whole.

METHODOLOGY

The present study was a descriptive survey in which the determining factors of the effectiveness of educational programs were defined based on library studies and the data were collected using a questionnaire containing a set of general questions (sex, employment status, experience, and academic education) and special questions.

Instrument of data collection

In this study, a questionnaire was used to collect the data.

Statistical society

The statistical society of the present study included all of the personnel who were working at Islamic Azad University, Kermanshah branch in 2012. According to the statistics, they were 239 working staff.

Study sample

The sample consisted of 125 staff.

Sampling method

The subjects were selected randomly from the statistical society and then were tested. The obtained results were generalized afterwards.

Data analysis

To analyze the data, descriptive and inferential statistics were applied on the data. It included concepts such as frequency tables and distribution proportions, geometrical and visual display of the distribution, and indices of data description included central indices (mean and sample), dispersion indices (variance and standard deviation). The following tests were used for the inferential level proportionate to the level of data measurement and main hypotheses of the statistical tests. For the inferential test, 6 tests were used to analyze the data including one-sample t-test, independent t-test, ANOVA multiple comparisons, Tukey trest, Freidman test, and Kolmogorov-smirnov.

Descriptive statistics

Table 1. Distribution of the personnel in terms of sex

Sex	Frequency	Percentage
Female	63	26.3
Male	176	73.7

As indicated in Table 1, from the total of 239 staff, 63 (26.3%) were female, whereas 176 (73.7%) were male.

Table 2. Distribution of the personnel in terms of academic degree

Academic degree	Frequency	Percentage
Under diploma	39	16.3
Diploma	72	30.2
Associate degree	23	9.6
Bachelore degree	92	38.5
Master degree	13	5.4

As indicated in Table 2, he results indicated that from the total of 239 staff, 39 were under diploma, 72 had diploma, 23 had associate degree, 92 had bachelore degree, and 13 had master degree. This indicated that most of the staff had bechelore degree.

Table 3. Distribution of the personnel in terms of experience

Experience	Frequency	Percentage
Under 5 years	77	32.2
5-10 years	70	29.3
10-15 years	50	20.9
15-20 years	33	13.8
20-25 years	9	3.8

The results for the job experience presented in Table 3 indicated that from among 239 personnel, 77 (32.2%) had less than 5 years experience, 70 (29.3%) had 5-10 years experience, 50 (20.9%) had 10-15 years experience, 33 (13.8%) had 15-20 years experience, and 9 (3.8%) had 20-25 years experience. So, the data indicated that most of the staff had low record of experience.

Inferential statistics

In this section, the hypotheses related to the main hypotheses 1 and 2 were analyzed using one-sample t-test, and the factors constituting these hypotheses were classified by Freidman test.

The results of Kolmogorov-smirnov (normality of the data distribution (KS))

The results of Kolmogorov-smirnov are presented in table 4.

H0: the scores of X factor are normally distributed.

H1: the scores of X factor are not normally distributed.

Table 4. Results of Kolmogorov- semirnov test

Hypotheses	Kolmogorov - Smirnov	Asymp.sig
Sub hypothesis 1-1	1.01	0.24
Sub hypothesis 1-2	1.46	0.28
Sub hypothesis 1-3	0.89	0.39
Sub hypothesis 1-4	0.94	0.33
Sub hypothesis 1-5	1.18	0.11
Sub hypothesis 1-6	0.96	0.31
Sub hypothesis 1-7	1.27	0.07
Sub hypothesis 2-1	1.78	0.05
Sub hypothesis 2-2	1.13	0.15
Sub hypothesis 2-3	0.83	0.07
Sub hypothesis 2-4	1.43	0.06
Sub hypothesis 2-5	1.09	0.18
Sub hypothesis 2-6	1.03	0.23

According to the results presented in Table 4, as the observed value was not significant ($p \geq 0.05$), the scores were not normally distributed in this study.

One-sample t-test

In this section, the hypotheses were discussed based on the results obtained from the samples and using the statistical treats.

Main hypothesis 1

The educational programs at Islamic Azad University, Kermanshah branch resulted in the improvement of services.

In this test, the statistical hypotheses are presented as follows:

$$\left\{ \begin{array}{l} H_0 = \mu \leq 3 \\ H_1 = \mu > 3 \end{array} \right.$$

Table 5. Results of one-sample t-test

95% confidence interval		Sig.	Meam	t	Factor
Maximum	Minimum				
0.454	0.186	0.000	3.320	4.737	Improving the services

Based on the results of t-test presented in Table 5, ($t=4.737 > t_{0.05, 98} = 1.658$), the hypothesis H_0 was rejected and H_1 , which stated the educational programs at Islamic Azad University, Kermanshah branch improved the sevice, was confirmed. These results are indicative of the effectiveness of educational programs in providing services at Islamic Azad University, Kermanshah branch.

Main hypothesis 2

The educational programs at Islamic Azad University, Kermanshah branch improved the indices of human resources.

The statistical hypotheses are presented as follows:

$$\left\{ \begin{array}{l} H_0 = \mu \leq 3 \\ H_1 = \mu > 3 \end{array} \right.$$

Table 6. Results of one-sample t-test with a moderate level (3)

95% confidence interval		Sig.	Meam	t	Factor
Maximum	Minimum				
0.426	0.148	0.000	3.287	4.106	Indeces of human resources

According to the results of the t-test indicated in table 6 ($t=4.106 > t_{0.05, 98} = 1.658$), the hypothesis H_0 was rejected and H_1 arguing that the educational programs at Islamic Azad University, Kermanshah branch resulted in the improvement of the indices of human resources, was confirmed. These findings show that the educational programs for human resources were effective.

Other findings of the study

The results of Freidman test

H0: the means of factors are equal.

H1: the means of factors are significantly different.

The results of the Freidman test reporting the classification of factors are presented in Table 20.

Table 7. Results of Freidman test

Sample count	125
Chi- square	170.439
df	13
A symp. Sig.	0.000

According to the findings

demonstrated in Table 7, H0 was rejected due to the non-significant difference ($p \geq 0.05$). Thus, there was a significant difference between the factors.

Table 8. Classification of the variables for the effectiveness of the educational programs

Factors	Mean
Reduction of costs	6.01
Reduction of movement	6.13
Increase in job satisfaction	6.23
Increase in commitment	6.94
Reduction of the time spent on the process	7.09
Reduction of repair and maintenance costs	7.12
Reduction of desertion	8.02
Increase in services	8.13
Improvement in cooperation management	8.32
Improvement of methods of doing tasks	8.73
Replacement of experts	9.15
Improvement of quality	9.28
Waste reduction	9.51

According to the information presented in Table 8, the variable of reduction in costs with the mean of 6.01 was ranked first, and the variable of waste with the mean of 9.51 was ranked thirteenth.

Results of multiple comparisons, independent t-test and Tukey test

In this section, the effect of variables sex, academic education, and job experience were discussed.

Effect of sex on the variables of the effectiveness of educational programs

Independent t-test was used to analyze the significant differences between the means of scores for the respondents' views on the effectiveness of educational programs according to sex. First, the equality of variances was analyzed by Levin test. The results indicated unequal variances for the services, personnel movement, job satisfaction, and personnel cooperation hypotheses, which was reported significant in independent t-test.

The sample group was classified to male and female groups, so the hypotheses were presented as follows:

$$H_0: U_1 = U_2$$

$$H_1: U_1 \neq U_2$$

The hypothesis H0 indicates that there is a significant difference between the means of male and female personnel views.

The hypothesis H1 indicates that there is no significant difference between the means of male and female personnel views.

Table 9. Results of the effect of sex on the variables of effectiveness of educational programs

Dependent variables	t- test	Sig.2 tailed	Maximum	Minimum
Sub hypothesis 1-1	-1.108	0.271	0.15	-0.55
Sub hypothesis 1-2	-0.457	0.649	0.27	-0.43
Sub hypothesis 1-3	-1.413	0.161	0.10	-0.61
Sub hypothesis 1-4	-0.056	0.955	0.38	-0.40
Sub hypothesis 1-5	-0.393	0.695	0.34	-0.52
Sub hypothesis 1-6	-0.602	0.549	0.27	-0.52
Sub hypothesis 1-7	-0.216	0.829	0.42	-0.53
Sub hypothesis 2-1	1.029	.3160	0.84	-0.28
Sub hypothesis 2-2	-0.046	0.964	0.43	-0.45
Sub hypothesis 2-3	-0.469	0.640	0.37	-0.55
Sub hypothesis 2-4	-0.374	0.709	0.32	-0.48
Sub hypothesis 2-5	-1.728	0.087	0.04	-0.69
Sub hypothesis 2-6	-0.128	0.900	0.42	-0.53

According to Table 9, the equality of means assuming equal variance for services, personnel movement, and personnel cooperation hypotheses, and the equality of means assuming unequal variance were not significant ($p \geq 0.05$). On the other hand, there was no significant difference between the means of views for male and female staff, therefore, hypothesis H0 was confirmed for all hypotheses.

CONCLUSION

Effect of level of education on variables of effectiveness of educational programs

The sample groups were classified into groups with under diploma, diploma, associate, bachelor, and master degrees, so the hypotheses were presented as follows:

$$H_0: U_1 = U_2$$

$$H_1: U_1 \neq U_2$$

The hypothesis H0 states that there is a significant difference between the means of the views of the personnel with under diploma, diploma, associate, bachelor, master and higher degrees.

The hypothesis H1 states that there is no significant difference between the means of the views of the personnel with under diploma, diploma, associate, bachelor, master and higher degrees.

Table 10. Results for the effect of level of education on variables of effectiveness of educational programs

Dependent variables	t- test	Sig.2 tailed	Maximum	Minimum
Sub hypothesis 1-1	-0.865	0.389	0.16	-0.42
Sub hypothesis 1-2	-0.755	0.452	0.17	-0.39
Sub hypothesis 1-3	-0.017	0.987	0.29	-0.29
Sub hypothesis 1-4	-0.015	0.988	0.32	-0.32
Sub hypothesis 1-5	-0.270	0.788	0.30	-0.39
Sub hypothesis 1-6	-0.198	0.843	0.29	-0.35
Sub hypothesis 1-7	-0.400	0.690	0.31	-0.47
Sub hypothesis 2-1	-0.255	.7990	0.30	-0.38
Sub hypothesis 2-2	-0.299	0.818	0.33	-0.42
Sub hypothesis 2-3	-0.056	0.956	0.32	-0.30
Sub hypothesis 2-4	-0.502	0.617	0.41	-0.26
Sub hypothesis 2-5	-0.047	0.962	0.30	-0.31
Sub hypothesis 2-6	-0.674	0.502	0.20	-0.40

According to the results presented in Table 10, the hypothesis H0 was confirmed. That is, there was no significant difference between the personnel's views and level of education.

Effect of job experience on variables of effectiveness of educational programs

The sample groups were classified into 4 groups (under 2 years, 2-5 years, 5-10 years, over 10 years), so the test was formulated as follows:

$$H_0 = U_1 = U_2 = U_3 = U_4$$

$$H_1 = U_1 \neq U_2 \neq U_3 \neq U_4$$

Table 11.. Results of the effect of job experience on variables of effectiveness of educational programs

Dependent variables	test F	sig
Sub hypothesis 1-1	3.786	0.013
Sub hypothesis 1-2	3.880	0.012
Sub hypothesis 1-3	3.091	0.107
Sub hypothesis 1-4	3.951	0.011
Sub hypothesis 1-5	2.235	0.089
Sub hypothesis 1-6	1.864	0.141
Sub hypothesis 1-7	1.749	0.162
Sub hypothesis 1-8	1.933	0.120
Sub hypothesis 2-1	1.272	0.289
Sub hypothesis 2-2	1.964	0.125
Sub hypothesis 2-3	2.051	0.112
Sub hypothesis 2-4	1.406	0.246
Sub hypothesis 2-5	2.193	0.094
Sub hypothesis 2-6	2.321	0.080

As indicated, the results for the first, second and fourth hypotheses were significant ($p < 0.05$), therefore, hypothesis H0 was rejected for this variable. On the other hand, there was a significant difference between the means of groups.

Limitations of the study

1. Some of the personnel did not believe in research and did not pay heed to the results of the study which created problems for the study.
2. The findings of the study were obtained from Islamic Azad University, Kermanshah branch. Caution is needed to be taken while using the results of this study in other organizations.

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