

Evaluation of training courses' efficiency in Tehran municipality based on Kirkpatrick model

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ABSTRACT

The aim of this paper is to determine the training courses' efficiency in Tehran municipality based on Kirkpatrick's model. The population of the research includes all training courses performed in Tehran municipality in 2008. Using a simple random sampling method, one training period was chosen, which includes 206 participants, 103 financial managers and rest their direct supervisors. For gathering relevant data in first level (reaction), third level (skill), fourth level (objective) and fifth level (rate of investment return), closed-ended questionnaire based on the Likert scale was used. For the second level (learning), we employed scores obtaining from masters in charge of training course (post-test). Our results show that in terms of the mayors' point of view, training courses in all levels except the second level had significant impact while financial managers saw these courses insignificant in all levels. Furthermore, it is found that both the mayors and financial managers were pessimistic about the second level. Results of present research can have significant implications for educational policymakers in order to improve the training courses.

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1. Introduction

One of the most important issues on learning more about the effectiveness of a training program is to design a questionnaire and ask audiences to give their insight about what they think about the program (Haverbeke et al., 2010; Ahmadi & Keshavarzi, 2013). In scientific and research firms, the training requires facilitator roles and techniques have undergone a change necessitated by rapid information and technology boom. There are some evidences to explain that evaluation and objective assessment of effectiveness and outcomes of training programs being used by firms are not given. Rajeev (2009) presented a method to analyze the theories of training evaluation in general. They also presented a case study of training evaluation of the academic training courses at the Indian Institute of Spices Research by revisiting the popular Kirkpatrick's model. The three-step evaluation model was a combination of formative and summative approaches using multiple techniques, which measure

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reactions, perceptions, learning and behavioral components of the trainees combining quantitative and qualitative tools and aims at assessing the usefulness of the course in providing an adequate learning climate. Enache and Crisan (2014) analyzed the teacher training models, which exist in the European educational systems and reported that the two professional training models, the simultaneous and successive ones were popular in most of the European countries. They also identified the kinds of teacher training systems and made a comprehensive analysis of the most effective educational systems, identifying and explaining the teaching skills developed in the training programs. Grammatikopoulos et al. (2013) made an assessment on evaluation of an induction training program for Greek teachers by evaluating an adjusted level model approach. They applied some qualitative and quantitative data to evaluate the value of the training. The induction training was provided to Greek teachers who were appointed as permanent public employees at the beginning of each academic year.

2. The proposed study

This paper tries to provide determination of training courses' efficiency in Tehran municipality based on Kirkpatrick's model. The population of the research includes all training courses performed in Tehran municipality in year 2008. Using a simple random sampling method, one training period was chosen which includes 206 participant including 103 financial managers and rest their direct supervisors. Fig. 1 shows personal characteristics of the financial managers and supervisors.

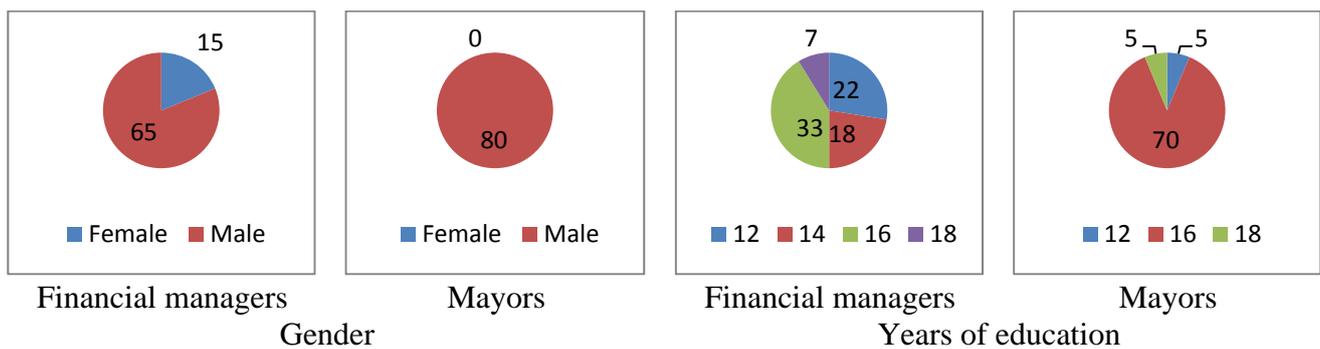


Fig. 1. Personal characteristics of the participants

As we can observe from the results of Fig. 1, most people who were enrolled as either financial managers are male and they were highly educated. In addition, all mayors were male and they were highly educated. The proposed study considers the following hypotheses,

1. Reaction hypothesis: There is a positive reaction towards the content and instructors of the programs.
2. Learning hypothesis: The program increases participants' learning capabilities.
3. Behavior hypothesis: The programs improve the participant's performance, improve knowledge, change behavior, improve attitude and enhance one's ability to deliver and to transfer the contents of the partners.
4. Results hypothesis: The courses reduces labor costs, reduces waste, and increases the speed of operations as well as work efficiency.
5. Return of investment hypothesis: The courses are worth to offer.

Table 1 demonstrates some basic statistics associated with different items on the questionnaire.

Table 1

The results of some basic statistics

Scale	Number	Range	Min	Max	Min	Standard deviation
Reaction to professor	80	11	8	19	13.818	2.6482
Reaction to facilities	80	8	8	16	12.772	2.6173
Reaction to content	80	10	9	19	13.3181	2.6616
Mayors' skills	80	20	32	52	40.75	4.5971
Results (Financial managers)	80	12	4	16	11.59	3.6208
Results (Mayors)	80	10	9	19	14.125	2.5527
Level of return (Financial managers)	80	12	3	15	8.5454	3.0972
Level of return (Mayors)	80	8	7	15	10.75	2.1756
Total reaction	80	25	25	50	39.909	6.5458

For gathering relevant data in first level (reaction), third level (skill), fourth level (objective) and fifth level (rate of investment return), closed-ended questionnaire based on the Likert scale was used. For the second level (learning), the study employed scores obtaining from masters in charge of training course (post-test).

3. The results

In this section, we present details of our findings on testing various hypotheses of the survey. The results are analyzed in three different categories of participants, financial managers and mayors. Table 2 shows details of our findings in view of the participants.

Table 2

The summary of testing the hypotheses of the survey in terms of participants' viewpoint

Hypothesis	t-value	degree of freedom	standard deviation	Sig.
1. Reaction	2.80	79	1.39	0.01
2. Learning	3.22	79	0.56	0.004
3. Behavior	2.32	79	0.56	0.03
4. Outcomes	1.38	79	0.55	0.18
5. Worthiness	6.74	79	1.14	0.00

According to the results of Table 2, except fourth case, outcomes, all other hypotheses have been confirmed when the level of significance is five percent. Similarly, we have performed a survey on examining the hypotheses of the survey in terms of financial managers and Table 3 shows details of our findings.

Table 3

The summary of testing the hypotheses of the survey in terms of financial managers' viewpoint

Hypothesis	t-value	degree of freedom	standard deviation	Sig.
1. Reaction	-0.80	79	0.22	0.01
2. Learning	0.0	79	0.23	1
3. Behavior	-1.67	79	0.19	0.11
4. Outcomes	0.37	79	0.24	0.71
5. Worthiness	-0.68	79	0.66	0.49

The results of Table 3 indicate that the training programs could only influence on financial managers' reaction and it did not influence on their learning capabilities, behavior, outcomes and they believe the programs were not worth of execution. Finally, Table 4 summarizes the results of our investigation on testing the hypotheses according to mayors' point of views. It is very surprising that the training programs were attractive in terms of mayors' perspectives. In other words, all hypotheses of the survey have been confirmed and mayors believed that the programs could increase their reaction, learning capabilities and behavior towards the content and instructors of the programs and the programs would have positive outcomes and worth to invest on.

Table 4

The summary of testing the hypotheses of the survey in terms of mayors' viewpoint

Hypothesis	t-value	degree of freedom	standard deviation	Sig.
1. Reaction	2.7	79	0.18	0.01
2. Learning	3.09	79	0.18	0.007
3. Behavior	2.23	79	0.22	0.04
4. Outcomes	2.76	79	0.20	0.01
5. Worthiness	3.21	79	0.54	0.006

4. Conclusion

In this paper, we have presented an empirical investigation to measure the effects of training programs on improving employees' skills. The study has determined that in terms of the mayors' point of view, training courses in all levels except second level had significant impact while financial managers saw these courses insignificant in all levels. Furthermore, it has been detected that both the mayors and financial managers were pessimistic about the second level. Results of present research can have significant implications for educational policymakers in order to improve the training courses.

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