Determination and priority of Training Needs of Employees of Municipality Fire and Safety Services Organizationin Tehran Capital City

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Abstract:

The primary focus of the present study is on determining the training needs of the staff of Tehran's municipality-affiliated fire department. The statistical population of this study encompasses all personnel working on shift and in suppression unit as first responders (3807 persons) that 349 employees have been selected on the basis of random stratification as sample. Regarding afore-mentioned selection, the research's questionnaire is provided with 75 questions and after three rounds of negotiation with adviser,consultant, some instructor, and number of division chiefs from suppression unit, the number of the questioner's items were decreased to 57 that include activities that the staff of operation unit may perform during their working hours.

In the present study, the researcher raised five sub-questions in order to arrive at an understanding about the main question. To determine the training needs, five fields including : Fire . Rescue,Logistics, Fire prevention, and communication and command have been taken into consideration.

The results of the study demonstrated that Fire department personnel are in desperate need for training in all detected fields including: (Firefighting,rescue,logistics , fire prevention and communication and command) . From the enumerated need aspects , those that are most salient include respectively : training courses for opening electric doors , method of opening and breaching theft-proof doors , confrontation with HAZMT incidents , extinguishment of fuel containers and gas stations incidents , high-rise fire operations and fire investigation.

Keywords: Training needs,Fire department, Safety Services Organization

Introduction

Tehran firefighting organization is one of the organizations affiliated to municipality of city of Tehran which is responsible for protecting the citizens' lives and properties in times of crisis and danger and also what, how much and howis it trained to face events which are not the same?Do they need to be trained or they have learnt things through trial and error? Do they have the necessary expertise in special events like hazardous material incidents? Are they familiar with the modern technologies used in buildings and around the city? Are they able to work with the new devices which are purchased for the organization? Do they remember what they have been taught throughout the different courses of service training? And such many other questions.

Tehran firefighting organization is one of the organizations of municipality which has changed through the last 12 years so that in 2000 and 2001 deputy of the city's utilities at the time have felt necessity of equipped training center existence. He established the cornerstone of the largest firefighting training center in the Middle East in a 13 hectare national land which has been spreads to 17 hectare at the next years.

As there were no research records in this field in Iran and all the courses were taught according to the management's personal view or copying West societies and sometimes without localization and also regarding to the numerous constraints, the researcher tried to base this significant issue for the first time.

The academic definition of training is an experience based on learning in order to create relatively steady changes in a person so that he could improve his ability to perform a task (Bruce Joyce, Emily Calhoun and David Hopkins, 2010, 7).

Definition of a training system is a set of prepared plans, methods and material to achieve certain training goals (Cynthia B. Leshin, Joellyn Pollock, Charles M. Reigeluth, 1992, 13).

If a person is preparing a training system for himself, there are instances such as curriculum including free study which the person would do for upgrade his knowledge; or a person prepares a curriculum for others including training which is presented by an employer to upgrade his worker's knowledge and skills. And or a group plans a curriculum for itself such as university students' group study to discuss various scientific topics or a group prepare a curriculum for another group like a short term training course which is specialized (Cynthia B. Leshin, Joellyn Pollock, Charles M. Reigeluth, 1992, 13).

Changes in society due to inventions and innovations have significant effect on different aspect of life. So the organizations as institutes within the society have to be in line with these changes. Therefore the organization structure were pushed from being simple and traditional forms to complex and specialized organizations and their duties and performances changed and became complex. In such situation preparing for a special profession requires specialized training and is time consuming. Therefore, employees' training has found a special place in most jobs (Fathi, 2011, 2).

Employees' training has found different forms. In some cases due to professionalism of the jobs, at the beginning a professional training would be defined for newly arrived employees and after some time according to changes of the system, service training would be required besides the primary training. Therefore, regarding the changes of these training courses,special various topics, courses and headlines would be defined according to the different hours which are briefly mentioned.

Types of employees' training:
    A) At the beginning of the service,
    B) During the service,
    C) Along with the service.

Correct, full and accurate planning is one of the essential requirements for training and improvement of human resources and an effective tool to achieve training goals. The first step in training planning is recognition and defining employees' training needs who were not able to perform their tasks and responsibilities well and does not comply with work standards. In this stage it should be determined that the shortage of which knowledge, skill or behavior lead to the appearing problems (Abtahi, 73, page 138).

In order to utilize more financial and human resources of organization, specialists define training, requirements, goals, content, and principles relevant to the training so that the organization's effectiveness and efficiency improve. The following chart shows the stages which should be done before starting the training and development. Meanwhile it is better to include the training method selection in the plan.

First steps in preparing a training and development plan
Requirements assessment: training and development: plan content, learning principles: actual plan: employees' skills, abilities and knowledge
Assessment standards

As it is shown, the first stage of the training curriculum is requirements assessment which training goals will be defined according to it. By requirement assessment we could save from training costs and better recognize the skill, knowledge and ability of the employees. Meanwhile it could be a standard for results assessment. Sub-steps or the essential stages to implement the stages of defining the goal and training courses content and also environment assessment relevant to it, is shown at the following figure (Abtahi, 1974, page 123).

Training needs determination (Training Need assessment) is defined as: ''Evaluating qualitative and quantitative changes in fulfilling duties and job-related activities of staff with the help of internship or implementing training programs , in order to maximize their efficiency ''.(kazemi,1380:308-309)

Sara cook (cook,2005 : 65-68) , presenting the ADDE Model, provides the following definition for analyzing training needs : ''analyzing training needs is reffered to as collecting data and analysis that conducted at the outset of training ''.

Training requirementsis one of the training systems' inputs which is the essential basis of the planning, execution and assessment of the system's operations. In many cases the learners have to learn subjects which could not be applied at their job position practically. Apart from its implications, this problem is due to two reasons: lack of accuracy in assessment of the requirements or lack of requirement assessment in training process. This could hinder the effectiveness of training curriculum and conformation of them with the needs of the audience and participants.

The goal of training requirement assessment is to achieve information about required principle and practical duties for playing the job rule and essential knowledge, skills and attitudes for performing those duties. Therefore, it could be stated that requirement assessment is practically a tool for information gathering that if it is performed correctly, it makes us stand out passive and ambiguousin training activities (Abbaszadegan and Torkzadeh, 2002, page 65).

Firefighting organization's employees' service training and safety services which is in fact kind of a professional training and forms a relatively large community from Tehran municipality services' labor forces and according to their profession and job, it is a necessary issue. Because they have to be able to save their fellow citizens' life and possessions in incidents and danger besides saving their own lives and they will prepare to utilize more and better equipment and facilities with raising awareness and skills in order to face no problems in achieving the organization's goals which the most important goal is to save people's lives and properties.

Concerning the fact that the firefighting and safety services organization is considered as a specialized organization which will act as specialists in special, critical and dangerous occasions, therefore their training is so difficult and significant. Some managers stated some sentences like "the employees' do not perform the works which are expected to do" or "we have training problems", which shows the necessity of planning.

The researcher concluded that there is a gap between the employees of operational division and those of the training division according to his 15 years work experience in Tehran firefighting organization and working in various divisions of the organization including operations, command and also an official 7 years work experience in training division and his studies, and filling the gap is the programmer's responsibility. Accordingly, the main research question was formulated as follows:

How many the employees of Tehran firefighting organization need to be trained and what are their priorities at training requirement?

To respond this question, secondary question were raised as follows:

1- How many the employees of firefighting organization need to be trained regarding to fire incidents?; 2- How much the employees of firefighting organization need to be trained regarding to rescue events?; 3- How much the employees of firefighting organization need to be trained in support affairs?; 4- How much the employees of firefighting organization need to be trained to prevent fire and incidents?; 5- How much the employees of firefighting organization need to be trained in communication affairs?

Methodology

As the present research is performed to introduce Tehran firefighting organization's employees' requirements, the descriptive-applied research methodology is utilized which fits the research subject in order to present an explicit image from employees' point of views regarding to need for training in fire, rescue, support, prevention and communication. Statistical population of this research includes all Tehran firefighting organization's operational employees which work in stations throughout Tehran in day and night shifts and the number of the employees were 3807 person at the time. According to a stratified random sampling and referring to the table of determining the mass of sample by Corjes and Morgan (1970), a number of 349 sample were selected from the employees which respectively samples of 227 firefighter, 65 expertise, 27 deputy of commander, 23 commander were selected by taking the ratio of each category with a combination of sampling methods of classifying and then random sampling, also according to 8 operational regions and according to their heterogeneous nature regarding random number of stations and taking the ratio of regions and according to ratio formula which the requirements are obtained from the sample employees' point of views. To collect statistical data and variables study using survey and questionnaire, the following sequence were applied:

1- According to the plan which was unprecedented, recognizing the mentioned organization's training requirements, short term and long term goals, definition of activities, definition of the current responsibilities of the employees were extracted after studying the research's literature from the theoretical aspect, existing study records in this field and also reviewing the organization's constitution.

2- At the second phase, papers with a topic as "write down your training requirements according to our operation region" were randomly distributed among various regions and stations throughout Tehran. And after collecting the papers (the number of the collected papers were 600) I started to monitor them and classified them in accordance with different aspects.

3- At the 3rd phase, eight specialized staff and operational experts, teachers and coaches were interviewed and a list of the organization's training requirements was prepared based on the previous phase's information and experts' point of views. After reviewing, modifying and adjustment of the questionnaire, it was classified to 75 questions based on the research's questions.

4- In this step measures were taken to prepare the genera format of the questionnaire through a meeting with supervisor and consultant professors and the number of questions reduced to 64 questions.

5- Respective deputies of the operation, training, training supreme consultant, managing director, managers and respective deputies of the eight operation regions were invited in order to perform reliability and the researcher explained details of the affairs and method of doing the job and the questionnaires were distributed among the authorities and they were asked to write down their point of views.

6- Finally a questionnaire with 57 item was designed and prepared after performing reliability consulting with supervisor and consultant professors and managers opining.

7- In order to define justifiability, the prepared list was presented to 26 professors in the faculty of the university and in the organization and after their opining and performing necessary reformations based on their opinion, the questionnaire was randomly distributed among 28 employees of the organization to define reliability. After evaluating the responses, they started to reform and prepare the final questionnaire. Descriptive statistics, mean and standard deviation and also uni-variatet-test inferential statistics were used for analysis.

Conclusion

In order to answer the question of "how much the employees of Tehran firefighting organization need training and what are their priorities in training requirements?" the uni-variate t-test was used which the results after calculation are as follows:

Row	Items/Indicator	Theoretical mean=3 (N=350)				
		Mean	Standard deviation	Amount of t	Degree of freedom	Meaningful level
1	Fire	3/122	0/59	3/877	349	-
2	Rescue	3/613	0/74	15/545	349	-
3	Support	3/407	1/05	7/224	349	-
4	Prevention	3/503	0/844	11/145	349	-
5	Communication	3/198	0/98	3/758	349	-
6	Physical education	3/368	1/08	12936	349	-

According to the table, all the mentioned items regarding the training requirements of the firefighting organization's employees in various areas, amount of t is significant at the level of α=%5 and as the experimental mean is significantly higher than theoretical mean, it could be said that the employees of the firefighting organization need to be trained at all the areas.

Second section, results regarding the questions of the second section are "**how much the employees of the firefighting organization need to be trained in fire incidents?**" According to the results all the mentioned items regarding the training requirements of the firefighting organization's employees in the field of fire, amount of t is significant at the level of α=%5 and as the experimental mean is significantly higher than theoretical mean, it could be said that the employees of the firefighting organization highly need to be trained in the field of fire.

Third section, results regarding the questions of the third section are "**how much the employees of the firefighting organization need to be trained in rescue incidents?**"

According to the results all the mentioned items regarding the training requirements of the firefighting organization's employees in the field of rescue, amount of t is significant at the level of α=%5 and as the experimental mean is significantly higher than theoretical mean (3), it could be said that the employees of the firefighting organization highly need to be trained in the field of rescue.

Forth section, results regarding the questions of the forth section are "**how much the employees of the firefighting organization need to be trained in the field of support?**"

According to the results all the mentioned items regarding the training requirements of the firefighting organization's employees in the field of support, amount of t is significant at the level of α=%5 and as the experimental mean is significantly higher than theoretical mean (3), it could be said that the employees of the firefighting organization highly need to be trained in the field of support.

Fifth section, results regarding the questions of the fifth section are "**how much the employees of the firefighting organization need to be trained in prevention?**" According to the results all the mentioned items regarding the training requirements of the firefighting organization's employees in the field of prevention, amount of t is significant at the level of α=%5 and as the experimental mean is significantly higher than theoretical mean (3), it could be said that the employees of the firefighting organization highly need to be trained in the field of prevention.

Sixth section, results regarding the questions of the sixth section are "how much the employees of the firefighting organization need to be trained regarding communication and command?"

According to the results all the mentioned items regarding the training requirements of the firefighting organization's employees in the field of communication and command, amount of t is significant at the level of α=%5 and as the experimental mean is significantly higher than theoretical mean (3), it could be said that the employees of the firefighting organization highly need to be trained in the field of communication and command.

At last it could be concluded that as the experimental mean in rescue is higher than other items, the essential and major priority of the requirements is rescue, and respectively priority is in items prevention, support, communication and fire.

Also in fire section the higher decelerated requirement is the question of "introduction to hazardous material training course" which is situated at the highest priority with a mean of 4/137.

After that, the decelerated required courses are respectively as follows:

- Training course of fuel containers and gas stations firefighting with an experimental mean of 3/85,
- Training course of high buildings firefighting with an experimental mean of 3/82,
- Training course of fire behavior with an experimental mean of 3/763,
- Training course of basements firefighting with an experimental mean of 3/688, and
- Training course of tunnels firefighting with an experimental mean of 3/63.

At rescue section the higher decelerated requirement is the question 30 that is "introduction to opening the electrical shutters training course" which is situated at the highest priority in rescue and also compared to other areas with a mean of 4/189.

After that, the decelerated required courses in rescue are respectively as follows:

- Training course of opening the anti-theft doors with an experimental mean of 4/186,
- Training course of swimming and scuba diving with an experimental mean of 3/851,
- Training course of how to open a car door having alarm with an experimental mean of 3/843,
- Training course of how to deal with suicide commitment intension with an experimental mean of 3/797,
- Training course of rescue from height with an experimental mean of 3/74, and
- Training course of how to deal with well incidents with an experimental mean of 3/7.

At support area the higher decelerated requirement is the question 41 that is "elevators and high ladders training course" which have stated at the highest felted requirement with a mean of 3/669.

At prevention area the higher decelerated requirement is the question 47 that is "fire investigation training course" which is the highest indicated requirement with a mean of 3/82.

At communication and command area the higher decelerated requirement is the question 55 that is "introduction to legal regulations training course" which have stated at the highest felted requirement with a mean of 3/643.

The results of the present research showed that the training requirements of the organization's employees differ in various areas. The respective experts of training should consider that issue in preparing employees training program. This is recommended that the authorities be informed from the training requirements of the employees by intermittent requirements assessment and consider their priorities according to the nature of special duties and responsibilities of Tehran firefighting organization which is saving the citizen's lives and properties and particular sensitivity of this job and also as requirement assessment was not academically and scientifically performed in any city and in any one of the firefighting organizations in Tehran and Iran's history of about 90 years of firefighting until so far and generally requirement assessment was copying West models and based on trial and errors. It is recommended that the authorities emphasis on all aspects of training requirements in particular human resources because the competence of the human resources of the organization leads to more productivity in line with serving the society and achieving the organization's goals.

Suggestions

It is suggested that the respective decision making managing director and senior managers:

- In terms of fire incidents , give their top planning priorities to : Course associated with the familiarization with hazardous materials , fire extinguishment in fuel containers and gas stations, Highrise building fires , and behavior .

- Concerning rescue , focus their attention on courses related to breaching electric and safe-guarded doors , swimming and scuba diving , dealing with those who intend to commit suicide , rope rescue , well collapse , building collapse , and road traffic collision .
- Provide a basis for holding workshops and training courses concerning aerial platforms and turntable ladders (T.l) periodically.
- Run courses associated with Fire Investigation in Fire Prevention Department.
- Hold training courses on familiarization with legal proceedings administrative regulation, and Incident command in the field of communication and command as well.

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