THE EFFECTIVENESS OF THE NATIONAL IRANIAN OIL PRODUCTS DISTRIBUTION COMPANY'S EMPLOYEES' TRAINING PROGRAMS BASED ON GROUNDED THEORY

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ABSTRACT

Organizations are heavily dependent on their human capital for performing their missions and duties. The development of human capital requires educational planning and the use of educational models maximizing the efficacy of human capital training processes. What is important in this regard is the organizational features or structures that make the successful implementation of training programs possible. The National Iranian Oil Products Distribution Company (NIOPDC) needs to improve its human resources' capabilities due to the arrival of new and innovative technologies. However, the effectiveness of training courses in improving staff's capabilities is not well understood yet, and training programs seem to be not so effective in the process of human resources' development. Therefore, it seems very important to understand the need for the implementation of proper training courses and analyze their effectiveness in enhancing employees' competencies in performing their duties more effectively, and with the least amount of error. The question arising from the above discussion would be 'what are the components contributing to the effectiveness of employees' training programs?' The population in the present applied mixed-method research included 24 managers, deputies, heads of departments and experts for the qualitative phase, and all NIOPDC's employees (n=999) for the quantitative phase. Using the Morgan's table, the sample size was determined to be 277 individuals, who were selected through stratified random sampling method. The qualitative data were collected based on Grounded Theory methodology, and via semi-structured interviews and checklists. Both face and content validity of the questionnaire were examined and its reliability was determined by calculating Cronbach's alpha (0.98). The collected data were analyzed through open, axial and selective coding processes. After analyzing the data based on Grounded Theory methodology, more than 19 main components and 79 subcomponents in the three dimensions of process-based, structural and contextual were extracted, and then, investigated and depicted based on the pattern matching technique.

Keywords: Effectiveness, Employees' Training, National Iranian Oil Products` Distribution Company, Grounded Theory Methodology.

INTRODUCTION

The development of human resources is one of the most important issues that has attracted the attention of successful and futurist managers since the emphasis on having skilled employees is the key to organizational success (Mourkani, 2015: 71-100). In reviewing organizational resources and capabilities, employees are considered as the most important resources of an organization; employees are the largest part and the most valuable resources in an organization. The most valuable type of organizational investments is the enhancement of

human resources' education (Danesh Fard, 2013: 27-54). Therefore, the implementation of proper human resources' training courses is a key factor in achieving organizational success. Such training programs can meet organizations' need for experts in the future and solve employees' current problems. Thus, well-trained employees can better contribute to the promotion of organizational performance. However, the mere implementation of training courses cannot help organizations achieve their goals. Training courses must be held based on scientific methods and principles in order to meet organizations' existing needs. Otherwise, the training courses will be impractical and only a waste of time and resources (Danesh Fard, 2013: 27-54). Studies on the implementation of the Sevenfold Administrative Transformation Program in the Iranian administrative system showed that, despite the presence of advanced technologies, productivity in public organizations has had a decreasing trend in recent years. Education is defined as facilitating the process of learning and making relatively stable changes in individuals' behaviors to enhance their capabilities in performing different tasks. Education can be done by changing people's attitudes and behaviors; in the organizational context, education can make changes in employee's knowledge, the ways they perform different tasks, their attitudes toward work, and their interactions with coworkers and supervisors (Ebili, 2010). The main goal of employees' training programs is to empower them to succeed in their jobs, develop their professions, adapt to changes and new life situations, and improve their overall performance to meet their needs. Accordingly, the growth and development of human resources through education has become more and more emphasized in organizations. This emphasis is also seen in evolutionary management efforts; most of the management experts and educational planners agree that the key to the implementation of organizational tasks and trans-organizational changes is to use effective in-service mechanisms (Fathi Vajargah, 2009: 102). On the other hand, one other important goal of organizational training programs is to transfer training to the workplace; but many scholars have emphasized that little transfer of training has taken place in organizational settings, and organizations have actually failed to achieve this objective. In fact, estimates suggest that only 10-15% of what is learned is actually transferred to work situations. Therefore, this low rate of training transfer to the workplace probably endangers the reliability and effectiveness of organizational training programs (Kontoghiorghes, 2014). However, the long-term success of any organization depends on how its employees effectively and continuously learn things and apply their new information to improve their job performance, which is also beneficial to the organization. Therefore, the execution of a continuous employees' training program is the key element that guarantees organizational success in the future. In this regard, estimates show that most of the educational and developmental resources have been wasted in organizations because most of the acquired knowledge and skills via organizational training courses have not been applied by employees in their workplaces (Handy, 2008). Such estimates increase the importance of examining what factors inhibit or facilitate the transfer of training to the workplace (Dermol, 2014).

Statement of the Problem

In many management books, education is defined as a management tool that addresses employees' occupational needs and helps them fulfill their organizational goals (Saadat, 2016). Education will play its social, political and economic roles effectively if it is purposeful and followed by precise plans. Success in education depends on having a targeted plan, in which case education plays its role effectively. Today, education and human resources improvement

are among the most important organizational positive adaptation strategies. The future of an organization is largely determined by its employees' knowledge and skill levels; the more employees are skilled and knowledgeable, the better an organization adapts to the changing environment. Education is one of the basic tools of management. However, education must be designed to change and modify employees' behaviors to achieve their organizational goals and objectives. Indeed, managers and directors need to enhance their effectiveness in order to cope with the increasing changes in tools and means of production. The improvement of an organization's efficiency is directly related to its in-service training; in this regard, it must be noted that in-service training alone does not solve organizational problems. The overall goal of most of the employees' training courses is to enhance the level of employees' technical skills. The need for acquiring new skills has appeared as a result of science and technology development.

In a mixed methods research, entitled "assessing the current status of training courses and providing a qualitative model for improving the effectiveness of training courses", Ezzati et al. (2017: 127-148) concluded that the current needs analysis programs, organizational goals/objectives, educational contents, instructors, course organizing and assessment activities, and motivation levels of employees of Iranian National Tax Administration were average from the viewpoints of tax experts.

In a study, entitled "examining the effect of in-service training on human resources empowerment", Khorasani et al. (2016) concluded that employees' training had significant positive effects on five dimensions of human resources empowerment (i.e., goal specification, ethical behavior, moral values promotion, teamwork activities and healthy work environment creation), and had no significant effect on the dimensions of constructive communication and willingness to participate. They also found that age, educational level, work experience, and organizational position significantly affected employees' attitudes toward the importance of education in human resources empowerment, but the type of educational course had no significant impact. They finally reported that moral values` promotion and constructive communication were ranked as respectively the most and the least important factors in employees' empowerment through education.

In a descriptive survey, entitled "identifying and prioritizing failures of employees' education system in Tehran Tax Organization", Motkhtarzadeh and Aghajani (2015) examined 12 experts in issues related to employees' education and concluded that the least productive stage was the execution of training courses.

In a qualitative-exploratory study, entitled "identifying non-educational factors affecting the use of education in organizations (environmental and transorganizational factors)", Lotfi et al. (2015) concluded that the factors affecting the use of education at universities included environmental (i.e., educational environment, manager's support, colleagues, outcomes, appropriate educational setting, rewards, organizational culture, employment, and organizational requirements) and transorganizational factors (i.e., society's expectations, social status and the rapid growth of technology).

In a study, entitled "investigating the factors affecting the transfer of training in in-service training off non-faculty members of Tehran University based on the Holton's Model", Abasalt Khorasani et al. (2015: 1-25) found that individual and organizational factors had the greatest impacts on the transfer of training to the workplace. They reported that the individual

(mean=2.68), organizational (mean=3.47) and educational factors (mean=3.7) affecting the transfer of training were all average barriers to transfer the training of Tehran University non-faculty members to their workplace.

In a study, entitled "the role of supervisor support on employees' training and job performance: An empirical study", Park et al. (2018: 57-74) concluded that supervisor's support for education directly affected learners' learning motivation, and that awareness of needs and learning motivation directly affected the transfer of training and job performance.

In a study, entitled "factors influencing training transfer in nursing profession: A qualitative study", Fang et al. (2018) concluded that health care managers needed to understand the factors affecting the transfer of training in order to maximize the benefits of education. He explained that right beliefs and values about education, rigorous selection of educational employees, relevance of contents, instructional guidelines facilitating learning and transfer of training, organizational observers, organizational cultures such as change, sharing, learning, and support, support from peers, and career development were key factors in successful training transfer. He continued that managers needed to be aware of their colleagues' oppositions and try to find ways to prevent them.

In a study, entitled "influences of workplace environment factors on employees' training transfer", Kanokporn et l. (2017:303-314) concluded that workplace environment factors directly affected training transfer of the participants, and indirectly affected it through the MT of the participants.

In a study, entitled "supervisor behaviors that facilitate training transfer", Lancaster (2013: 6-22) found that non-supportive organizational culture, limiting policies, and lack of encouragement were the most important barriers to the transfer of training.

In a study, entitled "investigating the relationships between workplace characteristics and transfer of training", Kia and Ismail (2013: 196-203) found significant positive relationships between all workplace dimensions (i.e., manager's support, colleagues' support, technical support, available budget, workload, workplace, and physical and mental environments) and transfer of training to the workplace.

In a study, entitled "examining the effects of employee empowerment, teamwork, and employee training on job satisfaction", Hanaysha (2016: 298-306) found that employees' empowerment and teamwork significantly affected job satisfaction.

In a study, entitled "a review of barriers to training transfer", Kontoghiorghes (2014: 65-79) mentioned the lack of occupational encouragement and reinforcement and workplace disruptive factors (e.g., time pressure, workload, inadequate authority, inefficient work processes, inadequate facilities and equipment, non-supportive organizational culture, employees' negative attitude toward training courses/educational contents/training programs, leaners' dissatisfaction with educational changes, lack of teachers' encouragement and support, and peer pressure to resist changes) as the most important barriers to transfer of training to the workplace.

In his doctoral dissertation, entitled "designing educational programs and learning transfer strategies", Landin (2006) used the Learning Transfer System Inventory (LTSI) to determine factors facilitating and hindering the transfer of training. He also examined factors affecting the transfer of training with respect to demographic factors such as age, gender, marital status, and work experience. The results of his study confirmed those factors that had already been

investigated by Holton and showed no significant difference between demographic variables in determining the mentioned factors.

The NIOPDC is one of the organizations that need to improve its human resources due to rapid global developments in the economic sectors and the arrival of new technologies. Thus, the NIOPDC has provided various training courses in order to achieve its goals concerning its employees' empowerment. The researcher's observations suggest that various courses have been held for the promotion of this organization's employees. However, the execution of those courses has been difficult and their positive effects on employees' performance and organizational productivity have not been as expected. One of the possible causes of such training programs' inefficiency is the lack of a systematic approach to education or the lack of attention to different steps of education decision-making cycle. In this regard, it is clear that assessing the effectiveness of training courses is of great importance. If such an assessment is done properly, its results will provide a more objective basis for educational planning. In fact, assessing the effectiveness of employees' training programs provides managers and employees with a clearer understanding of the quality of their educational activities, and equips planners and instructors with positive and negative aspects of their designed programs, and thus, helps them contribute more to the development of such programs.
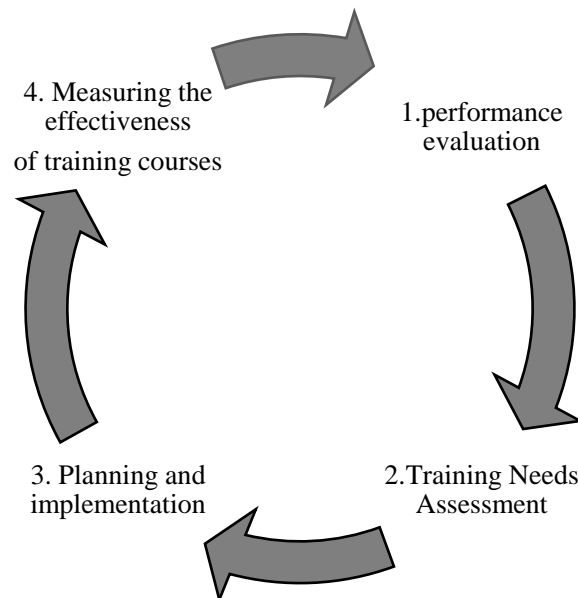

Figure 1. education decision-making cycle

(1) examining performance/ (2) educational needs analysis/ (3) planning and implementation/ (4) measurement of the effectiveness of training courses

Accordingly, organizations try to develop educational contents using information technology and modern educational methods (i.e., today's worldwide business needs to train employees to become able to deal with new challenges). Thus, education and training seem quite necessary for optimal organization performance, and to produce high-quality products and competitive human capital in the global market. Throughout the world, employers spend a significant portion of their capital on training their employees to improve their overall business; however, when training is not done effectively, they actually will lose their time, money and belief in

education as a viable business investment. Employees' training programs should be assessed based on their effectiveness in meeting organizational functional needs. Therefore, considering the importance of the above-mentioned issues, the present study was conducted to answer the following research questions and present effective strategies for improving the effectiveness of employees' training courses in NIOPDC.

Q_1: What are the components contributing to the effectiveness of employees' training programs in the structural, process-based and contextual dimensions?

Q_2: What are the rankings of components contributing to the effectiveness of employees' training programs' in the dimensions of structural, process-based and contextual?

Q_3: Which model is appropriate for the effectiveness of the NIOPDC employees' training program?

METHODOLOGY

The present study was applied research in terms of purpose, and mixed methods research in terms of data collection. In mixed methods studies, techniques of quantitative and qualitative methods are combined and used together in order to answer research questions in different domains. Croswell and Plano Clark (2011) considered exploratory design as the most prominent form of mixed methods studies. They explained that, in exploratory mixed methods research design, the researcher seeks to find a theme for uncertain situations, and examines processes. In doing so, s/he first looks for qualitative information and then starts to collect quantitative data; s/he first examines her/his subject qualitatively with a limited number of participants and then proceeds from qualitative information to the construction of a research tool. Thus, it can be concluded that researchers fundamentally use exploratory mixed methods design in order to study their subject matters in more details.

Therefore, in order to better understand the effectiveness of employees' training programs by examining it through documentary research, conceptual dimensions and the course of its evolution was analyzed based on a specific classification. In the next step, in-depth and exploratory structured interviews were conducted individually with informed and knowledgeable people at the organization level (i.e., regional managers, deputies, heads of departments, experts and experienced employees) in order to identify the essential factors contributing to the effectiveness of employees' training programs in NIOPDC. Then, the collected data were analyzed based on the systematic research design of Grounded Theory to identify concepts, categories, the main components and their related subcomponents, which were the bases for the development of the study's questionnaire. The designed questionnaire was used for the identification of factors (and their dimensions/components) contributing to the effectiveness of employees' training programs.

The statistical population of the study included managers, deputies, heads of departments and experts with executive backgrounds. This group of NIOPDC employees were selected to take part in the qualitative phase of the study (i.e., the interviews).

The samples of the study were selected through stratified random sampling method. Therefore, 24 samples were selected and interviewed. The demographic characteristics of the samples are presented in Table (1).

The interview process started in April 2018 and ended in June 2018.

Table 1. The interviewees' demographic characteristics

The specialist' field of interviewees	Job location	Number of interviewees
Heads of units	Mazandaran, Golestan, Gilan, North Khorasan	14
Managers	Mazandaran, Gilan, North Khorasan	3
Experts	Golestan, Gilan, Mazandaran	5
Deputies	Mazandaran, North Khorasan	2
Total	~	24

Table 2. The distribution of samples in terms of location

Region	Sample size	Ratio	Number of samples
Rasht	263	0.26	73
Chalous	139	0,14	39
Sari	304	0.30	84
Gorgan	180	0.18	50
Bojnourd	113	0.11	31
Total	999	1	277

Reliability and validity

Three points must be considered when determining the validity of qualitative studies:

a) **Authenticity**: It refers to the reality of descriptions and findings, which is determined through (1) triangulation method (i.e., consensus in method, consensus of researchers, consensus of data); (2) control of members (i.e., the researcher controls and discuss his/her findings with one or more informed subjects); (3) parallelization technique (i.e., the researcher presents his/her analysis and findings to experts); and (4) the researcher's self-evaluation of the findings.

b) **Generalizability:** It refers to the extent to which the results of a study can be generalized to other domains; generalizability can be examined through (1) presenting an in-depth and detailed description of the study's data sets; and (2) using coding and symbols` analysis procedures.

c) **Verifiability:** It refers to an attempt to obtain an objective index for research. Therefore, due to the importance of verifiability issue, achieving verifiability was observed during the processes of data collection, data analysis, raw data analysis, and data and results` interpretation.

Some scholars (including Stenbaki) believe that the concept of reliability is misleading and inappropriate in qualitative studies. However, other scholars (including Lincoln) believe that dependability in qualitative studies is the same as reliability in quantitative studies. Reliability of data is obtained when raw data, summarized concepts, and written processes are all confirmed by experts and university professors. In this study, the collected qualitative data were analyzed using open, axial and selective coding processes. In Grounded Theory methodology, coding refers to a type of content analysis seeking to find and conceptualize discussable topics that exist among a massive amount of data. In open coding, the researcher identifies the available concepts and expands them according to their characteristics and aspects. In axial coding, the researcher explores one of the categories as the basis of the

analysis process. When analyzing the data, concepts are directly extracted from interview transcripts via coding. In this study, the interview transcripts were regularly examined to find the main components and their related subcomponents and to prioritize them. The data related to each interview transcript were analyzed at the sentence and phrase levels. Finally, the conceptual codes were extracted from interview transcripts and were organized into main and subcomponents.

RESULTS

Table 3. The extracted basic conceptual codes from the interviews

1. Dispersal of educational level
2. Age differences between employees
3. A reference for the systematic announcement of educational needs
4. Lack of educational contents
5. Lack of relationship between educational contents and company's current issues
6. The design and planning of educational needs must be up-to-date
7. Educational contents are purely top-down
8. Authorities do not pay attention to training programs
9. Authorities do not appear in training programs
10. Dispersal of knowledge and educational levels
11. Educational contents are not up-to-date
12. Educational courses are not operational
13. Courses' evaluation questions are not answered accurately and willingly
14. Lack of innovative and nonconformist spirit
15. Trainers cannot motivate trainees
16. Educational contents are dictated by organizational hierarchies
17. Managers do not have the power to decide on the contents and timing of training courses
18. Managers need education as well as employees
19. Lack of funding for educational planning
20. Employment of well-educated professors with a solid scientific background
21. Time limit of courses
22. Presentation of difficult subjects in only one session
23. Employees leave their workplace to participate in training courses, while their presence at work is necessary
24. Social capital and relations are not well-defined in the organizations
25. Relationships have not been built in a way to encourage learning, productivity, and progress
26. Observational learning or learning from others is not common
27. Thinking to know everything and degree-orientedness are common

28. Considering the scientific depth of educational contents, some employees think the contents are not good enough for them
29. Addressing the issues of productivity and organizational excellence by motivating employees
30. Managers do not have adequate knowledge about human resources, productivity and innovative approaches
31. Finding expert trainers is challenging
32. Some positions are operational and shift-based
33. Considering the meritocracy system
34. The prevalence of indifference and lack of motivation
35. The prevalence of factionalism and useless conflicts between employees
36. Political perspectives lead budgeting and intellectual potential to non-practical training
37. Spending more time and money on other training or doing a second job
38. Short-term contracts
39. Non-practical training
40. Authorities do not consider educational contents as important
41. Developing programs at the macro level
42. Paying no attention to the educational needs of different regions
43. Coordination between employees' positions and their education
44. Participating in in-service training has no reward
45. In company-level planning, the needs of employees are not considered

Q₁: What are the components contributing to the effectiveness of employees' training programs in the structural, process-based and contextual dimensions?
Results of open and axial coding in the process-based dimension

Table 4. Open and axial coding concerning behavioral or process-based effectiveness of employees' training programs

Components	Open codes
Employees' participation in decision-making processes	Creating a financial and spiritual reward system
	Using employees' opinion in decision-making processes
	Providing employees with opportunities to participate in decision-making processes
	Supporting employees' plans and objectives
	Developing basic organizational training programs before the initiation of the main training
	Applying practical contents tailored to occupational categories
	Enhancing job security in the organization
Managers' and supervisors'	Prioritizing managers' and supervisors' training programs
	Managers' and supervisors' support of employees' participation in training programs

training programs	Letting employees participate in the realization of organizational goals
	Managers' consideration of the issues of productivity and reduction of organizational expenses
	Considering the meritocracy principle in organizational elections
Managers' support of and participation in the training process	Managers' and supervisors' participation in management improvement courses
	Considering stakeholders' interests in the organization
	Managers' support of employees' participation in the training process
	Cooperation between managers, supervisors, and employees in the training process
Interaction and the use of experiences	Using experienced and well-educated instructors
	Considering interactions and mutual respect between employees and others
	Specifying organizational goals and strategies
	Planning to empower managers, supervisors, and employees
The use of educational techniques and opportunities	Homogenizing learners in terms of experience, age, and education level
	Granting educational opportunities
	Providing employees with educational resources tailored to their needs
	Forming learning circles after the training process
Autonomy	Involving employees in, and asking their views about organizational challenges (accountability)
	Using the delegation of the authority principle
Encouragement and Persuasion	Changing the working procedure of employees
	Crating proper timing for training courses based on employees' opinions
	Creating financial incentives for participating in training courses

Results of open and axial coding in the structural dimension

Table 5. Open and axial coding concerning structural effectiveness of employees' training programs

Components	Open codes
Managers' organizational commitment	Selecting scientific and experienced employees for organizational positions
	Commitment and dedication to funding for training programs
	Engaging managers in employees' training programs
	Selecting managers based on the meritocracy principle
	Planning to promote employees based on the meritocracy principle
	Creating job promotion opportunities for all employees
	Using authentic educational contents
Academic calendar compilation	Needs analysis training for training practitioners
	Proper implementation of needs analysis for all employees
	Compiling an annual educational calendar
	Planning training courses tailored to meet adult needs
	Helping learners correctly implement what they have learned
A comprehensive	Developing a comprehensive training program and announcing it to other branches of the organizations in other provinces and regions

training program development	Compiling and announcing employees the overall goals and partial objectives of the organizations' existing positions
	Developing training programs in line with the country's developmental programs
	Compiling books for introducing jobs, goals and career needs
Managers' empowerment program	Establishing organizational learning strategies (transferring knowledge to others)
	Holding training courses based on educational calendar
	Monitoring and tracking the performance of educational experts in the implementation of the training process
Course and class management	Using the teamwork technique in classes
	Using appropriate assessment tools
	Designing and implementing a comprehensive knowledge/information management system in the field of educational planning
	Identifying and validating the rational relationships between educational chapters and goals and needs of learners as well as the overall organizational goals
Educational modification	Avoiding one-day courses
	Combining theoretical with practical training
Results analysis	Needs analysis and results notification
	Applying the results of needs analysis in the design of training courses
	Choosing course contents according to learners' needs
Planning and needs analysis	Using appropriate teaching patterns to meet learners' needs
	Making educational units independent by establishing planning and needs analysis committees
Managers' knowledge enhancement	Paying attention to and valuing the social capital of the organization
	Aligning training with topics' strategies
	Avoiding the random selection of learners in training courses
	Educating managers to enhance their management knowledge

Results of open and axial coding in the contextual dimension

Table 6. Open and axial coding concerning contextual effectiveness of employees' training programs

Components	Open codes
Elimination of economic problems and strengthening communication	Eliminating households' economic problems
	Strengthening the organizations' relationships with universities, higher education institutions, and top organizations to update employees' training methods
	Strengthening the organizations' relationships with universities to recruit instructors and achieve scientific support
	Educational planning for employees' training courses in line with the country's developmental programs
	Establishing social partnership networks with the presence of all employees
	Training managers and employees and strengthening their social skills
	Supporting continuous improvements, and encouraging employees to take risks and learn from their failures
	Holding reflection sessions to empower employees

	Creating a coherent system for permanent contact with universities and top regional organizational
Policy-making	Developing specialized training courses versus general courses
	Specifying economic development strategies for the oil company
	Managers' efforts to improve the quality rather than the quantity of training courses
	Avoiding monopolized education in the organization
Privatization and monitoring	Avoiding interference of beneficiary institutions in organizing training courses outside the organization
	Allocating budgets and tracking how they are spent
	Cooperating with the private sector in holding courses

Q2: What are the rankings of components contributing to the effectiveness of employees' training programs' in the dimensions of structural, process-based and contextual?

Prioritization of effective components in the process-based dimension

To prioritize the effective components in the process-based dimension, the seven identified components in this dimension were ranked based on Means, Friedman ranking technique, and Analytical Hierarchy Process (AHP) method.

Table 7. Rankings of effective components in the process-based dimension

Component	Mean	Friedman rank	AHP	Ranking
Encouragement and persuasion	26.73	6.80	0.250	1
Managers' and supervisors' training programs	23.08	6.14	0.214	2
Managers' support of and participation in the training process	16.06	4.20	0.179	3
Interaction and the use of experiences	16.01	4.18	0.143	4
The use of educational techniques and opportunities	14.59	3.51	0.107	5
Autonomy	11.10	2.11	0.071	6
Employees' participation in decision-making processes	7.49	1.06	0.036	7

Prioritization of effective components in the structural dimension

To prioritize the effective components in the structural dimension, the nine identified components in this dimension were ranked based on Means, Friedman ranking technique, and Analytical Hierarchy Process (AHP) method.

Table 8. Rankings of effective components in the structural dimension

Component	Mean	Friedman rank	AHP	Ranking
Managers' organizational commitment	28.32	8.95	0.200	1
Academic calendar compilation	18.83	7.79	0.178	2
A comprehensive training program development	14.93	5.80	0.111	3
Managers' empowerment program	11.62	4.23	0.089	4
Course and class management	15.08	5.99	0.133	5

Educational modification	7.61	2.50	0.044	6
Managers' knowledge enhancement	7.99	2.63	0.067	7
Planning and needs analysis	15.35	6.10	0.156	8
Results analysis	3.86	1.00	0.022	9

Prioritization of effective components in the contextual dimension

To prioritize the effective components in the contextual dimension, the three identified components in this dimension were ranked based on Means, Friedman ranking technique, and Analytical Hierarchy Process (AHP) method.

Table 9. Rankings of effective components in the contextual dimension

Component	Mean	Friedman rank	AHP	Ranking
Elimination of economic problems and strengthening communication	30.85	2.99	0.500	1
Policy-making	9.73	1.99	0.333	2
Privatization and monitoring	11.03	1.01	0.167	3

Q3: Which model is appropriate for the effectiveness of the NIOPDC employees' training program?

In order to answer this research question, and develop an acceptable model of effectiveness, and determin if the markers were all measuring the basic construct, Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were conducted.

According to the results of CFA, 29 subcomponents and seven main components of (1) employees' participation in decision-making processes, (2) managers' and supervisors' training programs, (3) managers' support of and participation in the training process, (4) interaction and the use of experiences, (5) the use of educational techniques and opportunities, (6) autonomy, and (7) encouragement and persuasion were identified in the process-based dimension; 30 subcomponents and nine main components of (1) managers' organizational commitment, (2) academic calendar compilation, (3) a comprehensive training program development, (4) managers' empowerment program, (5) course and class management, (6) educational modification, (7) results analysis, (8) planning and needs analysis, and (9) managers' knowledge enhancement were identified in the structural dimension; and 16 subcomponents and three main components of (1) elimination of economic problems and strengthening communication, (2) policy-making, and (3) privatization and monitoring were identified in the contextual dimension.

The fit index of GOF was calculated for each of the three models of effectiveness in the three dimensions of process-based, structural and contextual, and the results indicated that the designed models fitted the data.

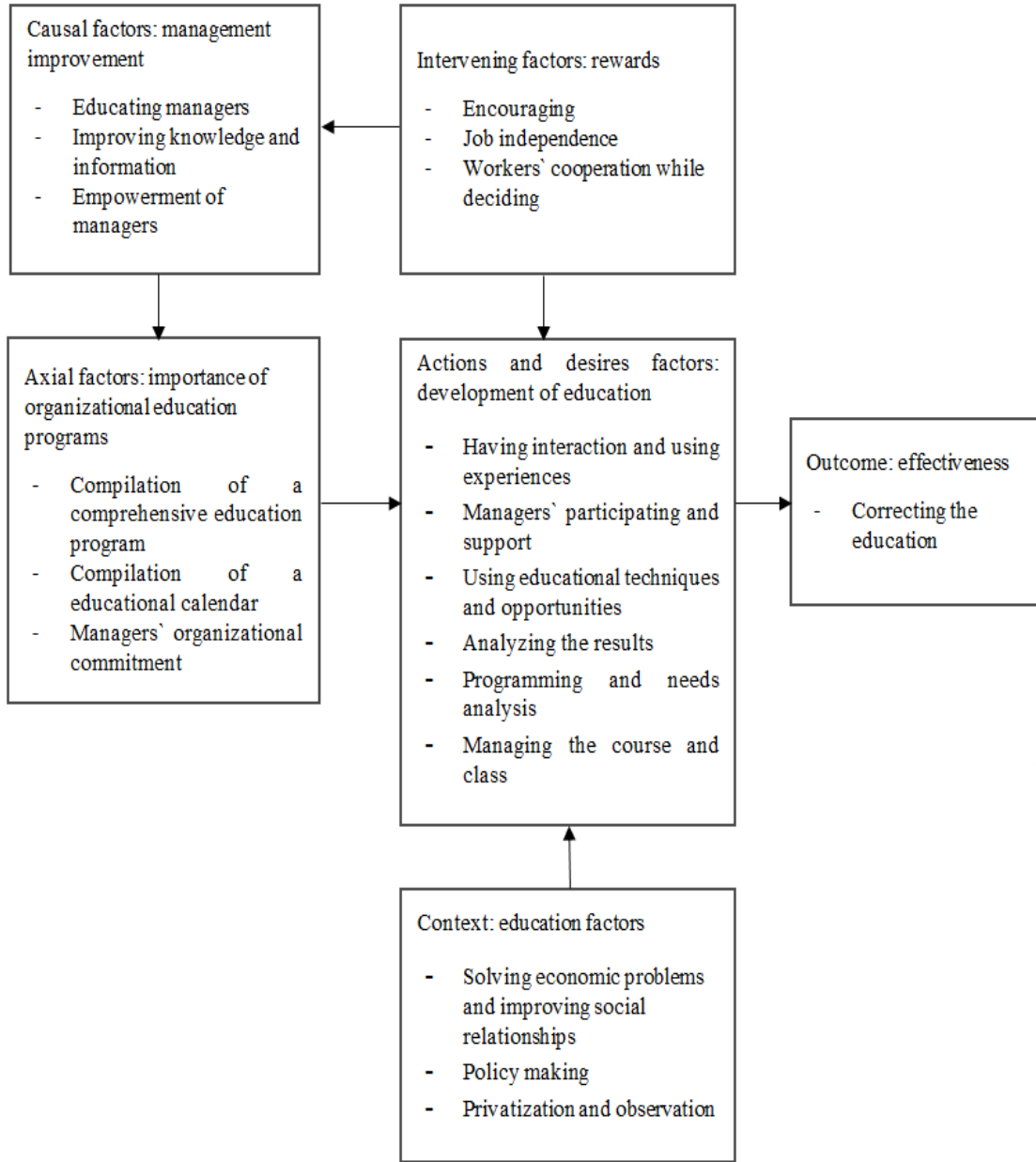$$GOF = \sqrt{0765 * 0.740} = 0.567 GOF = \sqrt{\overline{com} * \overline{R^2}}$$

Figure 2. The Effectiveness Model of employees' training program based on Grounded Theory Methodology

I. **Causal factors (management improvement):** Human resources are undoubtedly the most important factors in production. Management improvement is selected as a causal factor because it is one of the strategies to achieve human capital and adapt to changes; therefore, it can be considered a competitive advantage playing a significant role in the development of organizations. In this research, the importance of human resources, especially managers, in the effectiveness of employees' training programs was obvious. The researchers of this study believed that managers' knowledge must be improved and their capabilities must be developed in different aspects.

II. **Axial factors (importance of organizational training programs):** This factor is the result of the causal factor; considering organizational training programs as important facilitates the management process, and makes managers feel more committed to developing comprehensive training programs and compiling educational calendars for their employees.

III. **Intervening factors (rewards):** Although this class of factors is not directly involved in the education process, it is a general condition that includes a set of intervening variables affecting the actions and desires of managers and employees. Financial incentives, job autonomy and employees' participation in decision-making processes actually involve employees in organizational activities and challenges and enhance the cooperation between employees, supervisors, and managers in different sectors, including education.

IV. **Actions and desires factors (development of education):** These factors are influenced by the intervening, axial and context of education factors. One the one hand, managers consider education as important and they try to develop comprehensive training programs, and on the other hand, they try to provide their employees with rewards, solve their financial problems, strengthen their social relations, and make proper policies in line with their organizations' conditions and employees-managers interactions; therefore, the process of education will be performed more efficiently.

V. **Context of education factors:** These factors affect employees' actions and desires; they include the environment in which education occurs. Issues such as eliminating employees' financial problems, strengthening employees' social relations by modeling and implementing appropriate social programs, making policies to facilitate the process of communication with scientific centers, and privatizing the education process can improve employees' training context, and therefore, improve the effectiveness of training programs in an organization.

VI. **Outcome (effectiveness):** The outcome, or achieving an effective educational program, results from the interactions between other groups of factors; achieving an effective educational program improves the education process, and therefore, increases the effectiveness of employees' training programs at the organization level.

DISCUSSION AND CONCLUSION

By considering employees as the most valuable capital and investment in human resources' education as an important issue, organizations try to achieve great goals. Investment in human resources' education is not considered a cost in organizations. Unfortunately, most of the organizations only focus on education at the final stage of their training courses, while they need to pay more attention to employees' training programs when education has been identified as a solution to a problem. Is education a solution? If the answer is positive, what requirements should be taken into account in order to enhance the effectiveness of an educational program? In other words, a comprehensive training program must exist based on the results of needs analysis and thinking about how to implement a course and how to assess employees' learning at the end of that course. In fact, the design of employees' training programs has significant impacts on employees' learning and the organizational effectiveness

of that program. Studies on the trend of investment in educational activities in recent years have shown that the amount of allocated resources to training programs has increased, and organizational managers and authorities have paid more attention to the implementation of such programs. However, organizational authorities and decision makers are still concerned about the effectiveness of their current training programs. Along with various reasons that can be mentioned for the lack of effectiveness of these programs, the lack of knowledge and skills regarding the decision-making cycle in educational activities can be pointed out. In this regard and in order to enhance employees' performance in organizations, various models of education have been applied. The importance of these models comes from the fact that each of them has been developed based on certain assumptions, and therefore, it is acceptable to specific situations; on the other hand, the acceptance or application of a particular model, or a combination of several models, theories, components, processes or teaching methods lead to the development of human resources.

Employees' training in the organization depends on a number of conditions and the availability of some facilities according to the nature and types of employees' activities, and not providing those conditions and facilities leads to a decrease in the quality of the education, or in other words, reduces the effectiveness of the training program. According to the results of this study and due to the importance of employees' education, the following suggestions are made to improve the effectiveness of training programs in organizations:

- ❖ Employees, who attend the training courses, should be motivated enough. Both internal and external factors can be effective in motivating employees to participate in learners' discussions. In this regard, instructors can play a key role. Therefore, instructors are recommended to apply motivational strategies and proper incentives to motivate their adult learners.

- ❖ Regarding interests and attitudes, it should be noted that learners' attitude toward education is a key factor in the success of an educational course. Learners should have a positive attitude toward themselves and toward the process of education; this positive attitude is affected by different factors and variables. Therefore, organizations must help their employees form this positive attitude as far as possible.

- ❖ Paying attention to educational environments and using educational tools are necessary factors in order to promote the effectiveness of training programs and improve learners' education. Moreover, considering proper timing for holding training courses can help organizations achieve higher degrees of educational effectiveness.

- ❖ Regarding assessment and evaluation, instructors are recommended to provide learners with their assessment results as soon as possible. The use of various assessment methods is also recommended. Obviously, the clarity of assessment criteria is an important factor that can contribute to the effectiveness of an educational course.

- ❖ In order to promote the effectiveness of training courses, their educational contents should be developed based on the needs and knowledge/skill levels of participants, and participants must be provided with opportunities to practice those contents.

- ❖ Organizational policies and rules are also among the most important factors contributing to the effectiveness of training programs. In this regard, it is recommended that laws be passed in support of the continuation of education and employees'

attendance in organizational training courses to help them promote their knowledge and skill levels

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