

COMPARING ORGANIZATIONAL LEARNING RATES IN PUBLIC AND NON-PROFIT SCHOOLS IN QOM PROVINCE OF IRAN

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Abstract: *Regarding the increased complexity and dynamics of environmental factors and rapid changes, traditional organizations are not longer able to match with such changes and are destroying. Hence, as a tool for survival and matching with these changes, learning organizations are highly considered by many firms and corporations. What you are reading, is a summary of theoretical basics and findings of a research about the rate of organizational learning of schools. Present research is based on reviewing the rate of organizational learning of public and non-profit high schools. To obtain the research aims, this hypothesis was considered: "there is a difference between the rate of organizational learning of public and non-profit schools."*

To collect the data and find the characteristics of learning organization (high school) library method and to review the rate of organizational learning, a structured questionnaire (after determining the reliability and validity) were utilized. Collected data were analyzed by using descriptive statistical method including frequency indices, frequency percent, mean and inferential statistics such as Mann-Whitney test. Findings of Mann-Whitney test show that there is a meaningful difference between the rate of organizational learning of public and non-profit schools: "in all achieved characteristics, the rate of organizational learning of non-profit schools is more than public schools."

Key words: learning organization; organizational learning; public schools; non-profit schools

Introduction

Today, change that is a result of human's inventions, has involved all communities and our age is called "change age." All educational, economical, political and other kinds of organizations are under such changes. Because of such rapid changes, Benis calls organizations as "temporary systems."

As the starters of wide social changes, training systems are themselves facing with changes and their transformation in unavoidable. Heler says: "Today, the head of a pedagogic area can not neglect innovations in long term and he/she must show his/her courage to accept such innovations and do not resist them."

As the operational units of formal pedagogic system, schools have significant role and position in achieving training needs and ideals. So, the quality of human forces in schools especially the principal as an authority who designs and handles the processes and trends, allocates the resources, shapes the results, creates the learning capacity for all messages and experiences inside and outside the schools, is a fundamental factor. What matters, is the reinforcement of training principals to needed skills, techniques and knowledge for changes. Many schools are not ready for implementing learning philosophy and others are going downhill because of their wrong management. In such schools, reviving issue is too important. Establishing learning schools needs a valued and visionary shift in educational system especially in all principals.

Problem expression

Today, organizations are in a changing and unstable atmosphere and huge changes have faced them with many problems. Facing with continuous change waves is obvious in the frame of new technologies in social relations of the organizations. In this age, one should endeavor to use innovations and technical/scientific achievements in order to run the organizations and to pave the way for innovations and proper plans in such organizations. When environmental uncertainty is high, organizations need more knowledge and awareness of using environmental factors in order to adapt themselves with environmental changes and transformations. In such conditions, the only way for future organizations is converting themselves to a permanent learning system to determine their environmental needs, to provide necessary tools to adapt themselves with the environment and to continue their life. Learning organization is a response to a changing, dynamic and unpredictable workplace. In fact, the nature of learning organization is using the extraordinary mental capability of organization's staff in order to achieve performances that improve organization's conditions (Dickson, 1990).

Therefore, regarding continuous of a skilful and high quality human force and the necessity of continuous answers to innovations, we need a learning organization that should learn, grow and break the organizational structures which prevent schools' internal growth. Utilizing the principles of learning organization can cause transformation, motion and new changes in training units. It is a step in establishing learning school.

Research objective

The aim of the research is to prepare functional guidelines by which principals can use them to develop learning organizations. Meanwhile, another aim is to answer some questions about the concept of learning school, such as:

1. What is a learning organization?
2. What are the characteristics of a learning school?
3. What shall be done to encourage and reinforce learning organization?

Research literature

Learning organization means the skills and capabilities of the organization to create, achieve and transfer the knowledge and reforming individuals behavior to reflect a new knowledge and vision (Garvedin, 1993).

Organizational learning: a process in which organization members find mistakes and attempt to revise them (Argyris and Schon, 1978).

Public schools: according to law, these are schools run by the government.

Non-profit schools: these are schools founded and established by people's participation based on aims, rules, plans and general recipes of Education Ministry and are monitored by this Ministry.

Although one can identify a long history for "organizational training", the formal emphasis on training backs to mid-1940s. At those years, experts believe that "in-service training" should be designed and implemented in a way to be effective for overall organization's improvement. To achieve this aim, training should be effective either in identifying organizational deficiencies or in resolving the problems (Soltani, 2001, p. 200).

In next years, planning and implementation of organizational training courses were increased broadly. "The formation of training courses started form UK and USA and then distributed gradually from two academic routes and great/multinational firms to other countries" (Mehrdad, 2001, p. 8). However, by starting "organizational development" activities, training was considered as a principal element in all HR management programs and the amount of emphasis on training was considered as one of the important scales in organizational efficiency. In this period, organizational improvement experts analyzed concepts such as "organizational training", "individual learning", and "collective learning" in various aspects.

Above discussion resulted to the emergence of "learning organization" concept. In 1962, it was March who gave a definition for this concept for the first time. This concept was discussed and analyzed by management connoisseurs until the early 1990s when Wick and Roberts granted a new definition. According to Wick and Roberts (1993), learning organization shapes via the informed interactions of individuals that result to "collective intellectual".

The fundamental reason of emphasis on learning organization is the growing speed of changes. Among researches on learning organization inside and outside the country, there was not a research that studied learning organization in training units. Hence, it is attempted in this research to use the generic frameworks of "learning organization" to devise a new paradigm for the principles and characteristics of learning organization that

are appropriate with schools' conditions and requirements. Following discussion addresses to this question that how training organizations can convert to a learning organization.

The characteristics of a learning school

The issue of learning in organization should not be considered only as a cognitive issue. We should look for characteristics by which organizations can achieve a clear and complete understanding for obtaining the skills of organizational learning. These characteristics should be identified and taught to principals in order that they use them to improve learning organization. In this research, a library method is applied to find the characteristics of learning organization and to review the research background. By using computerized searching, domestic and foreign researches were studied and finally four following characteristics that could be applicable in schools were chosen from various characteristics:

1. Change-maker leader

Change-maker leaders are those who facilitate changes, innovation, creativity and entrepreneurship; believe in organizational transformation; and prefer organizational reviving (Slitzer, 1990, p. 699).

In a learning organization, leaders are also designers, observers and teachers. Their responsibility is to make organizations where people can increase their common mental models and their capabilities. It means that leaders are in charge of employees' learning. Their vital role as the designers of learning organizations is to integrate the views, purposes and systemic thinking. The first step in planning organizational structure is to design the ideas and viewpoints, ideals and fundamental values that people believe and live with them. Stata says: "As a whole, organizational planning is to understand untouchable values that link the elements to each other."

The best way to realize "leader's role as an observer" in the framework of a learning organization is to study that how all people are committed to works which are an interpretation of their visions and ideas. As teacher, leader is not going to teach others how to observe. He/she is going to cultivate learning inside them. Inside the organizations, such leaders help the people to broad their views and systematic understanding (Senge, 1990). Therefore, more than any other activity, conducting organizational changing programs is based on effective leadership patterns.

2. Creative and constructive staff

In today pedagogic view, the rate of responsibility, freedom and independence of school staff (Robins, 1995, p. 967), have caused that the schools being considered as the origins of social changes and innovations and they are so-called "changeable" entities. In this line, pedagogy and society have mutual effects and pedagogy transforms not only the individuals but also other entities. Therefore, it is a context for transformation. This vision has achieved an important position in today vision. Such changes will cause innovation in training and education.

Nowadays, some thinking schools believe that creativity, is teachable and learnable (Kwartko and Hagets, 1989, p. 70). According to "changeable view" and definition of creativity, a learning school is an entity which is skilful in achieving creativity, transforming

the knowledge and changing the behaviors to reflect new knowledge and insights. Creativity and innovation will be encouraged and a system is designed in which the role and share of each person is determined and creative/innovative ideas and plans are grown and executed in an interactive and collective process. It is obvious that such conditions needs creation and promotion of reliance, respect and mutual cooperation in order to provide necessary grounds for free expression of opinions and new plans. The schools must commit themselves to improve their staff in order to be benefited from learning and creative staff. So, an important and effective endeavor in line with learning organization is planning for growth and development of staff and breeding learning and creative individuals.

3. Collective learning (team working)

Collective learning is a process in which the capabilities of group members are developed and are coordinated in a way that resulted to a conclusion that all people are looking for (Senge, 1990).

In the organizations, collective learning has three basic aspects: (1) needing to deep thinking about complex concepts (2) needing to a new and coordinated act (3) the role of team members in other teams. Collective learning is based on to dialogue and discussion. "Dialogue" means to express basic and complex problems creatively and freely and to listen to other's viewpoints deeply. On the other hand, "discussion" means to find the best point to support the decisions made over time. Potentially, dialogue and discussion complete each other. Most groups, however, fail to distinguish them. Meanwhile, collective learning should be able to fight against powerful barriers on constructive discussion and dialogue. Chris Argyris calls these barriers as "defensive ways."

4. Common ideal

Common ideal is a force that behaves inside people's hearts as a huge power and gets them to act (Senge, 1990). However, the common ideal is maybe inspired by a good belief, but it never stays in one believing level. Particularly, the common ideal will be so effective that many human acts will be driven by its power, if it is supported by more than one individual. What is common ideal that creates such a power? In the simplest level of common ideal, the answer is "what we are going to create." The personal potential and actual capability will guide human to a certain direction and common ideal performs such act in organizational level. In this line, it creates a huge power. Exactly, one of the reasons that people are looking for common ideal is to link their imaginations about their own ideals by which to create a common support in order to be protected by it. Common ideal is a vital factor in establishing a learning school because that it supplies necessary energy for learning. Today, "ideal" is a known and familiar concept in organizational leadership. Have consider its growth in detailed, we can understand the practically, the ideals of one person or a small group of men are dominated over the organization. At the best conditions, others do not oppose these ideals but do not feel commitment to them. However, a common ideal is one that most members of a society or an organization or a school feel belonging to it because that they consider it as their own personal ideal. An ideal can act as a live and dynamic force that the people believe that they can construct their future and walk in this route actively. Therefore, there is a simple and obvious truth that many managers do not perceive it. Managers never see their own share in creating current conditions and problem. Basically, they do not accept their responsibility, face the truth proactively and believe that all

problems are due to system or environmental pressures. Teaching managers and principals can create an environment in which individuals can find and develop their personal ideals.

5. Motivational incentive

Everything will be repeated if it is reinforced. In fact, suitable rewards should be determined for certain behaviors in order to be repeated (Levebof, 1993, p. 85). By motivational incentives we mean the allocated rewards that are paid to employees based on their performance indices not their service background, relations, etc (Robins, 1995, p. 968).

Built-in rewards are among the fundamental pillars of rewarding and incentive system in entrepreneurial and learning organizations. Such incentives meet individuals' mental needs including the feeling of meritocracy in work, respect, belonging to a group, freedom, dependence, authority and progress. People like to feel honor and proud for what they do. They need that their works are driven by their motivations. Learning organizations consider followings in their incentive and rewarding system carefully:

- Types of incentives
- Employees' merits
- Regulating rational executive aims
- Performance-based incentive and rewards
- Predicting (estimating) the amount of chances that people could have for being rewarded.

Therefore, considering the limitations for paying material and extroverted incentives, schools' principals should do their best to develop their employees' learning capacity by introverted rewards (Samad Aghaei, 1999, p. 156).

6. Organizational Culture

A powerful learning culture emphasizes on high learning capacity of schools' employees as well as the organizational values and norms in an individual or collective process (Finger, 1999).

There are various definitions for organizational culture. For example, organizational culture is described as the superior values by which organization is supported, or a philosophy that guides organization's policy toward staff and customers, or values by which daily works are performed in the organization (Robins, translated by Alvani and Danayi Far, 1997, p. 1381).

Many texts are written about dominated atmosphere and culture in schools. However, school culture should be humanity and has a comfortable and peaceful space mentally. Individuals should be relate each other warmly. Schools should be supportive, namely, they should spaces where the people can access needed training tools and cooperate with and learn from each other (Ron Brandt, 2003).

7. Experience and knowledge application

It means that schools endure many tests and failures. Of course, a test and experiment is acceptable that is based on planned thought and is defensible. We do not mean test-and-error. Learning organizations believe in failure-success theory. It means that failures and successes are happened simultaneously. In fact, this theory divides the organizations into four categories:

- Shooting star organizations: these are organizations that have both many successes and many failures and have a short life like shooting stars. They accept irrational risks.
- Sentenced to death organizations: these are organizations that have irrational risks.
- Fire-brand organizations: these are organizations with small successes and failures. They are like half-burnt wood and can survive for longer term but with not a considerable profit.
- Outstanding organizations: these are organizations with small failures and high successes.

Entrepreneurial and learning organizations are in outstanding organizations category. Of course, it does not mean that they never fail, but with encouraging fruitful failures (encouraging those who promote the vision and learning of other people by expressing their own mistakes and reasons of their failures) and denying irrational risks, they go from shooting star category to outstanding category. On this basis, incentives in learning organizations have no relationship with the results of activities or events. Besides, the incentive system is designed so that they have the highest effect on individuals' vision and thought in order to find and utilize new opportunities. In other words, learning organizations believe that rewarding the successes is simple but rewarding smart failures is more important and harder because that the efforts are based on the efforts not the achieved results.

8. Accepting the suggestions

Contributive management facilitates the involvement of employees at various levels in problem identification process, analysis the situation and achieving proper resolutions (Management Association, 1992, p. 17). Contributive decision-making is a way to curb bureaucracy and to create motivation and find oneself situation (Bull Ve Ball, 1989). The fundamental hypothesis of employees' contribution is that employees' contribution leads to more productivity. This positive relationship between employees' contribution and productivity is resulted from the belief that interacting with staff in work decisions will cause that they feel more satisfactory feeling in their work. Accepting system and reviewing the suggestions can lead to increase the employees' desire in order to think about schools' improvement if such system is paid attention in schools and a program is planed for it. To systemize this method a secretariat should be established to collect the suggestions, a council and ad hoc committees should be formed to investigate these suggestions and such activities should be promoted under the school principal's supports.

9. Information Exchange

Principals must start their work by asking themselves two questions in order to produce useful data:

- What information my colleagues will receive from me? How? When?
- What information do I need? From whom and how? In what schedule?

The first question shows the importance of work nature. Our first question should be about others' needs and then to achieve the second question.

Those principals who ask themselves such questions will realize very soon that only a small part of their needed information is inside the organization and major part of these information is outside the organization. Such information should be organized separately

and independently. "What information do I owe to others?" and "What information do I need from others?" seem simple; but in practice, answering them is difficult and needs high thinking, experience, experiment and endeavor. On the other hand, one should not assume that the answers are always stable and permanent. Particularly, when remarkable changes are happened in various times, organizational structure, work and mission should be reviewed.

People will understand mentioned questions and will find proper answers for both questions if they consider these questions carefully and seriously (Blanchard, translated by Amini, 2000). Awareness and information exchange (regular, exact and flexible) are performed in inter-school, intra-school and cross-school conditions. For example, information about doing the works on time, standard deviation, the rate of people's absence, complaints, students and their parents appreciations, the rate of relations with students/parents, pursuant, job units-related data (training – research data), contribution rate, employees' satisfaction and any other information that a leader needs to understand successful management, are also needed by staff for a correct decision. Schools' principals should have the courage to start informative contribution work because that its risks are not less than information monopolization.

10. Using environmental opportunities

This means that the population of each age group should be able to access training resources and facilities. Therefore, training facilities such as school, class and competent teachers should be provided for attracting the students and those who must be taught. By allocating school space in informal hours, providing special possibilities like equipments, laboratory, computer, extra program classes, students' team-making and shaping learning groups, schools' principals and staff can provide better learning opportunities for students.

11. Customer-oriented

It means that the main focus is on customer satisfaction via continuous progress in efficiency and quality of services. Nowadays, servicing or producing organizations consider customer satisfaction as an important scale in measuring the quality of their works. This trend is keeping on. A successful organization is one that while supplying customers with qualitative and acceptable goods and services, meets their needs and even provides them with services that are higher than their expectations. Achieving such level of customer satisfaction is impossible unless one assures that by continuous experiments and investigations of a quality system, organization has always a good possibility to visit customers' needs/expectations. In fact, the first objective of an organization must be customer satisfaction in highest level. Customer-oriented organizations provide a proper ground on which customers can inform the authorities of their suggestions and complaints. In learning and responsible schools, principals measure the satisfaction level of students, parents and staff directly by their researches such as questionnaire distribution, shaping student councils, associations, studying the problems via training and research units; teachers council, correspondence boxes, etc.

12. Matching with ongoing changes

School's organizational structure is organic (dynamic and human nature) and school members are allowed to participate in decision making processes and represent their

new ideas, opinions and resolutions. It will encourage them to contribute in change and transformation process as an element of pedagogy system. Current viewpoints regarding learning organizations rely upon adaptability capability. With regard to rapid steps of shifts, a research in Fortune magazine reads: "The most successful corporations in 1990 were those that were called learning organizations and had the highest adaptability capability." Therefore, against traditional schools with bureaucratic structure, learning schools have organic structure and their members are allowed to participate in decision making processes and represent their new ideas, opinions and resolutions. It will encourage them to contribute in change and transformation process as an element of pedagogy system.

13. Performance assessment

Performance assessment means to improve employees' performance and information exchange in relation with their activities and also to establish a basis for promotion, incentives, advisory and other aims that relate with employees' future work. We must consider performance assessment as a positive method in staff's participation. Many supervisors consider performance assessment as undesired task. Conversely, if as a part of hiring process, the employees are interviewed sufficiently, are training correctly, are helped when needed and are advised carefully, then their performance will reflect the accuracy rate of such tasks. Performance assessment reveals that how much an employee has been effective in organization's success. Culture, ethics, training levels and pre-determined beliefs influence over evaluations. It is really unfair to have a weak ranking based on bias or something except than what is important in assessment. Therefore, an unfair assessment can cost the organization to miss one of its valuable employees. So, in evaluations and running the organization, a unified and steady leadership is not helpful longer. Since the combination of training and education human force is a mixture of various cultures, principals should be able to penetrate into them despite of individuals' different cultures.

14. Systemic thinking

Systemic thinking means that principal and staffs consider all elements of the school and believe that there is a mutual and dynamic relationship between their school and environmental conditions. Systemic theory in management is a thinking method about organizations that provide managers with a framework by which they can have an integrated vision about inside/outside factors. In this theory, it is emphasized on dynamic relationship among organization's shaping factors as well as the dynamic relationship between organization and other organizations. On this basis, the manager has a holistic and generic vision (Zarei Matin, 2001, p. 101). The main part of systemic thinking is changing the visions. Therefore, by using a new pattern of thinking, training management can evaluate these elements by relying upon its concept and spatial situation, evaluate their effects in relations between adjacent and non-adjacent factor, and understand its position in shaping total concept of the organization to achieve the aims. A school is learning if its principals start thinking to identify systemic paradigms, apply this method as an effective tool in their daily behaviors and decisions and discover hidden secrets of problems and difficulties.

Research methodology

Topics	Descriptions
Research type	Descriptive-survey
Statistical population	All public and non-profit high schools in Qom City 2002-2003
Sample size*	$n = \left[\frac{z_{1-\alpha} + z_{1-\beta}}{d} \right]^2$, $d = \frac{\mu_2 - \mu_1}{\sigma}$
Sampling method	Stratified random (34 public schools – 34 non-profit schools)
Measuring tool	40-inquiry questionnaire
The method of reliability	Alpha Chronbach = 0.95
Data analysis method	Mann-Whitney test

* In sample size formula for hypothesis testing, $\alpha = 0.005$ is type I error, $\beta = 0.05$ is type II error and $d = 0.8$ is the precision

Research hypotheses

Main hypothesis: there is a difference between organizational learning in public and non-profit schools.

To evaluate organizational learning, 14 characteristics were identified and 14 sub-hypotheses were designed as follows:

1. There is a difference between employees' creativity rate in public and non-profit schools.
2. There is a difference between utilizing systematic thinking in public and non-profit schools.
3. There is a difference between utilizing science and experience in public and non-profit schools.
4. There is a difference between change-making leadership in public and non-profit schools.
5. There is a difference between motivational rewards in public and non-profit schools.
6. There is a difference between team working in public and non-profit schools.
7. There is a difference between organizational culture in public and non-profit schools.
8. There is a difference between accepting the suggestions in public and non-profit schools.
9. There is a difference between common ideals in public and non-profit schools.
10. There is a difference between using environmental opportunities in public and non-profit schools.
11. There is a difference between customer-orientation in public and non-profit schools.
12. There is a difference between matching with time changes in public and non-profit schools.
13. There is a difference between information exchange in public and non-profit schools.
14. There is a difference between performance assessment in public and non-profit schools.

Research findings

At present research, organizational learning had one hypothesis with 14 indices. They were evaluated by using Mann-Whitney test. The results are listed as follows:

A: the average rate of organizational learning characteristics at two types of schools in Qom City

Organizational learning characteristics	Non-profit Schools	Public Schools	Z	P.Value
Performance assessment	202.62	145.54	-5.402	0.0001
Information exchange	195.72	160.57	-3.298	0.0001
Matching with time changes	214.48	140.15	-6.869	0.0001
Customer-orientation	211.62	143.35	-6.373	0.0001
Using environmental opportunities	217.59	141.13	-7.167	0.0001
Common Ideal	210.31	146.94	-5.856	0.0001
Accepting the suggestions	202.31	156.08	-4.303	0.0001
Organizational culture	209.93	146.15	-5.888	0.0001
Team working	205.97	150.81	-5.113	0.0001
Motivation reward	203.69	154.14	-4.608	0.0001
Science and experience application	218.62	138.06	-7.512	0.0001
Change-making leadership	166.85	119.49	-4.898	0.0001
Systemic thinking	202.42	157.24	-4.253	0.0001
Employee's creativity	221.00	140.89	-7.345	0.0001

By using Mann-Whitney test and comparing each index-related averages, it was identified that non-profit organizations in all characteristics (14 sub-hypotheses) have better conditions than public schools.

B: the average rate of organizational learning characteristics at two types of schools in Qom City

Average	Numbers	School type
208.64	169	Non-profit
127.88	167	public

Main hypothesis: there is a difference between organizational learning in public and non-profit schools.

$$H_0: \mu_1 = \mu_2$$

$$H_1: \mu_1 > \mu_2$$

By using Mann-Whitney test, $Z = -7.621$ and by $P < 0.0001$, H_0 is not supported. It means that organizational learning in non-profit schools is more than public schools. So, main hypothesis is supported.

Research limits

1. Careless and reluctance of samples in answering to questionnaire who thought that the aim of questionnaire is to evaluate training centers (schools). So, it is suggested that culture-making organs, Ministries, managers and experts emphasize on completing the questionnaires and attempt as a bridge between training centers and research centers.
2. Limitations emerged from human complex behavior and uncontrolled variables that made it difficult to identify and control them despite of researcher's efforts.
3. Unavailability of a standard questionnaire. Although the researcher did his best and the questionnaire had a high validity after making necessary modifications, it is not a standard questionnaire.
4. Lack of research information and resources regarding the concept of learning organization in training organizations. It is hoped to have richer resources through future researches.

Suggestions

1. Reviewing the concept of learning organization, aspects, conditions, requirements, the benefits of a learning school, the role and position of learning in efficiency of school and organization in all levels/elements of pedagogy organization and designing a clear/practical administrative plan for establishing a learning school.
2. To restructure schools in a learning organization, administrative principles and trends of a learning organization must be implemented in all levels of the organization. The logic and rationale of the structure of a learning organization must shape the organizational culture. It means that these principles should be executed for both employees and managers.
3. Accepting the philosophy of a learning organization in different managerial pedagogy levels especially in restructuring of schools and their tasks and activities.
4. Equipping the schools especially their principals and pedagogy divisions to facilitate learning in themselves and others.
5. To establish learning schools, it is necessary to decrease the bureaucracy and principals being enjoyed more authority and freedom.
6. Utilizing 14 identified characteristics in researching schools' organizational structure practically.

References

1. Ahmad Pour, M. **Entrepreneurship (third edition)**, Tehran, Pardis Publishing, 2001
2. Alvani, M. **Today Successful organizations: Knowledge making learning organizations**, Public Management Applied Scientific Magazine, vol. 26 & 27, Autumn and Winter, 1994
3. Beckhard, R., and Portichard, V. **Change and Innovation Management**, translated by Samadi Iran Nejad Parizi, Managers Publishing, 1999
4. Blanchard, K. (2000), **Three Keys of Power increasing**, translated by Fazl Allah Amini, Tehran, Fara Publication, 2000
5. Bleed, R. Learning organization (leadership, chaos, Individual Roles), 1999
6. Brandt, R. **Is this school a learning organization? 10 ways to tell**, Journal of Staff Development, Vol. 24, No.1, 2003
7. Dick, B., and Dalmau, T. **Argyris and school: some elements of their models**, 1999
8. Dorusny, J., and Websion, J. **Systemic Thinking Method (second edition)**, translated by Amir Hussein Jahanbelgo, Tehran, Pishbord Publication, 1995
9. Hagh Shenaz, M. **Creativity in Training and Education**, Management Knowledge, Vol. 33 & 34, 1999
10. Handy, C. **The Age of Paradox**, translated by Abbas Mokhber, Islamic Culture and Guidance, Ministry Publication, 1995
11. Hesseline, F., Goldsmith, M., and Beckhard, R. **Tomorrow Organization (second edition)**, translated by Fazl Allah Aminin, Tehran, Farda Publication, 2001
12. Hoy, W. K., and Miskel, C. G. **Theory, Research and Practice in Training Management (second edition)**, translated by Mir Mohammad Abbas Zadeh, Urumieh University Publication, 1992
13. Mohammad, G. **Learning Organization: The Output of a Half-Century Organizational Changes**, Management and Development, Vol. 9, 2001
14. Kew, P. J. **Learning World in Schools (first edition)**, translated by Farokh Legha Raeis Dana, Tehran, Pedagogy Research Center Publication, 1997
15. Samad Aghayi, J. **Entrepreneurial Organizations**, Public Management Training Center, 1999
16. Senge, P. **Fifth Command**, translated by Hafiz Kamal Hedayat and Mohammad Rooshan, Tehran, Industrial Management Organization Publication, 1996
17. Soltani Tirani, F. **Institutionalization of Innovation in Organization**, Tehran, Rasa Cultural Institute Publication, 1999
18. Wayne, D. **Applied Nonparametric statistics**, KENT Publishing, 1990
19. Zaly, M. R. **Creating Learning Organization: from Theory to Practice**, Tadbir, Vol. 74, 1997
20. Zareei Matin, H. **12 Characteristics of learning organization**, Qom's High Education Complex Magazine, Vol. 10, 3rd year, 2001
21. Zomorodin, A. **Change Management**, Tehran, Industrial Management Organization Publication, 1996

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