

Designing of Learning Organization Model Case study: Islamic Azad University, Tabriz branch

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ABSTRACT

In wisdom orientation area, building learning organization, effective design at earning competitive advantage, is new approach that is observed frequently in managerial references. In this organizations have been mentioned to two elements human and knowledge that have vital role. On this base building or development of organizational learning process is the most important process. The process that caused increasing of employees knowledge, their and organizational development and organization transfer to dynamic and excellence system. Therefore cognition of organization learning measuring tools is important subject and necessity ought to be used. Out come this action, planning will be for building or developing learning organization. In this research has been used of Armstrong-Foley questionnaire for measuring organizational learning process with goal transferring Islamic Azad University, Tabriz branch to learning organization. Hypotheses have been planed in adoption with four basic elements of questionnaire. Statistical analysis of hypotheses based on inferential tests: X^2 one dimension and T-test shows that Islamic Azad University, Tabriz branch, hasn't been learning organization. On the base of research modeling process has been presented the model of learning organization building with its mechanisms for this university.

KEYWORDS: Organizational learning, organizational learning measurement, organizational learning management, learning organization

INTRODUCTION

In the 21st century ought to be fast and very complex revolutions in internal and external environment of organizations. Changes in science, technology, economics, culture and politics quickly have influenced organizations. Nowadays, the important factors like globalization and global economy, technology, severe change of work world, growing influence of customer, raising knowledge and intellectual capital management, changing roles and expectations of the employees, labor diversity and mobility, and rapidly expanding change and turmoil have changed the business world. In the beginning of 1990s with the rapid developments and changes in the environment variable, most organizations began extensive efforts for profound changes in their structure and foundation to leave the static molds. Therefore the use of new approaches brought on. The study of management knowledge shows that experts in learning organization and organizational learning believe that in the new era, wisdom era, the most important responsibility of leaders and managers is creating the learning organization. What does the learning organization more than others? On the other hand, what is the difference between this organization and others? Where can organizations begin to change into learning organization? Evidently in the learning organization, the most important event is realization of organizational learning process which requires planning and organization, in other words, the process which is in the center of management attention to change the organization into learning through continuous supervision on the manner of its incidence and development. The present study has tried to do the practical example of measuring the learning process to present the suitable model of learning organization for Islamic Azad University, Tabriz branch.

LITERATURE REVIEW AND RESEARCH BACKGROUND

Organizational learning from the 1990s was the attention of many of academic, research and industrial centers, which the main reasons for raising this topic is rapid changing of environment, and in creased competitive pressure of globalization.

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Argyris and Schon (1996) have defined the organizational learning as error detection and correction. Shrivastava (1993) has mentioned four perspective of organizational learning as: 1. Compatibility and compliance 2. Developing knowledge and relationships resulting from actions 3. Cooperative thought and perspectives 4. Experience institutionalized. Huber (1991) has believed that organizational learning can be used at any level of analysis for individual, group or the entire organization. Mumford (1997) has believed using ten behaviors in the formation of organizational learning is necessary; Asking questions, offering suggestions, discovering alternatives, risking and testing, being open and proactive, changing mistakes into learning, evaluating and review, talking about learning, accepting responsibility of self-learning and its development, and allowing the occurrence of mistakes and shortcomings. For Senge (2009) believing in and practicing five principles of shared vision, personal mastery, mental models, collective learning and the fifth and most important principle i.e. systemic thinking ability are effective in generative learning (organizational learning). Most of the experts including Senge and Pawlowsky (2001) and Najafbagy (2006) have mentioned the levels of individual, group and organizational learning in discussing aspects of the learning. Individual learning is indicative of change of skills, visions and beliefs, evolution and change in individual knowledge, acquired attitudes and values by the person through individual study, technology-based training, observation and other ways. Group Learning means that teams and groups think as a single identity, members discuss together, transfer their experiences and knowledge to each other, teach each other and learn from each other, innovate and create. Thus the capacity of members extends. In overall, group learning transfers personal knowledge to organizational knowledge that is usable and available by everyone. The third level is organizational learning. This learning results from sharing insights, knowledge, experience and mental models of the members of the organization. Organizational learning is established based on the knowledge and experience that exists in the memory of the organization, and injected to the mechanisms such as policies, strategies and patterns which depend on knowledge saving. Doing this the organization shapes new knowledge in itself or reconstruct, modify and adapt according to the environmental changes. The result of organizational learning manifestation is organizational learning in practice. Gephardt and Marsick (1996) have told learning organization has additional capacity for learning, adaptation and change. Choo (2001) has believed that the learning organization is exactly the knowledge organization. Watkins-Marsick (2004) have believed that learning organizations have features that include: 1. Continuous learning 2. raising the level of research and discussion in the organization 3. encouraging the sense of cooperation and group learning 4. empowerment the employees to reach a collective vision 5. designing and implementing systems for employees participation in learning 6. compatibility of system with its environment 7. strategic leadership. Marquardt (2002) by defining systemic of learning organization has expressed that it learns by power and in form of collective and continuously changes itself in a way that it can gather, manage and use the knowledge in a better way with the aim of the success of organizational complex. Therefore learning organizations differ from in the following attributes: 1-Learning is not an extra thing to do, but it is an ordinary part of the job in a learning organization. 2- Learning is not limited to a certain time but it is a process. 3- Cooperation lies underneath of every affair. 4- Individuals help to their organizations by developing them selves. 5- Learning organizations are creative. 6- Learning organizations learn from experiences. 7- It is very exciting to be a member of a learning organizations (Alvani, 2001). The reflectable problem is that how organizational learning can be evaluated to ensure that whether the organization has been learning or not. Organizational learning measurement is somehow harder than defining and describing it. Reviewing relevant literature shows that there are several tools for evaluation and pathology of organizations to measure its degree of being learner. Sobhaniazhad et al. (2006) have studied that the first cognitive tools were used in the form of a questionnaire as a result of conducted study in some British companies. Strategy, vision, structure, out looking and learning opportunities were the major topics covered in it. The second questionnaire of Weich and Leon (1993) entitled "Evaluation of competencies in the learning organization" has been presented. These two experts arrived at the following pattern through interview, evaluation and observation of four successful learning companies namely Boeing, Analogdivicner, Kerning and Lyrsting. Learning Organization= leadership based on vision * plan, assessment * information * Taking an step * action. The third Cognitive tool was presented by Pearn and his colleagues (1995). They provided a tool which was comprehensive and expanded from the learning instigation and leading point of view but superficial and outward in terms of the whole learning organization. The fourth questionnaire in the book of Sarala and Sarala (1996) was categorized according to the values, structure and processes, leadership and making decision, work organizing, training and development, and internal and external interactions of the organization. The fifth questionnaire on entitled "The quick test for recognizing the learning organization" was presented by Ganns (1996). He believed that the pioneer learning organization is a part of organization strategy.

Answering 11 questions of this questionnaire based on Liker scale clarifies that to what extent the organization under study had been a learner one. The sixth tool "quick test of learning organization", otala questionnaire (1997) includes 20 sentences or expressions. The seventh tool, Tannenbaum (1997) has emphasized processes and training and accentuate the learning methods relating to the job. The eighth tool of Redding and Catalanello (1998) has determined three primary patterns which are categorized as following: traditional, continuous improvement and learning organization. The ninth questionnaire by Mayo and Lank (2001) has been very expansive and comprehensive and consists of 187 questions and 9 clause. The central point of this questionnaire is the attention to organizational, individual and team learning factors and the views of the leaders and managers. The tenth questionnaire entitled "organizational learning evaluation questionnaire" was presented by Neefe (2001). Its aim is to gather data about organizational factors and management actions affecting organizational learning ability. The eleventh questionnaire entitled "the profile of the learning organization" was designed and presented by Marquardt in 2002. He expressed the development of five elements of learning, employees, organization, technology and knowledge in the form of systemic pattern of learning organization through doing research on learning organization so he tested the five variables of learning dynamism, organizational evolution, empowerment the persons, knowledge management and using technology in the questionnaire with relative alternatives. The twelfth questionnaire was introduced by Armstrong and Foley (2003). They wanted to know how learning should occur in the working environment for the organization to become learner. These two researchers identified "the mechanism of organizational learning". The thirteenth and perhaps the most comprehensive questionnaire of learning organization belongs to Watkins-Marsick (2004) which is known as "the questionnaire of learning organization dimensions". This tool was ordered in four parts, addressing the individual, team, organizational and macro subjects. As a fourteenth tool, "diamond tool of learning organization" was introduced in an article by Moiyilanen (2005) which consists of forty sentences, twenties of which considers organizational level and the rest individual level. The result of these evaluations and measurements of learning process in practice was to recognize learning obstacles and to represent the model of learning organization. The surveys show that cultural obstacles, managers' resistance, performance - orienting and the lack of learning time, exclusive and uncompetitive environment and politicized environment are rudimentary obstacles of organizational learning. The result of the learning process evaluation, if it is indicative of the inability of the organization under study to become learner, is the representation of pattern for creation of learning organization. The experts have considered the leaning obstacles when representing the models for the creation of the learning organizations. The six-factored pattern of Pearn INVEST (1995), the five-factored systemic pattern of Marquardt (2002), the conceptual pattern of Taslimi and Khorshidi learning ability [26], Behnami organizational learning pattern (2004), the structured learning pattern of Hong (1999), three-staged pattern of Garvin (2000), Seajou synthetic pattern of learning flow (2001) and the working force pattern of Jorgensen (2004) are examples of learning organization creation.

The Goal and Objectives

- A) Survey Islamic Azad University, Tabriz Branch, based on position identify of four dimensions mechanism learning environment.
- B) Mechanism of identify learning environment and developing needs.
- C) Mechanism of learning and developing needs supplying,
- D) Mechanism of learning using in workplace
- E) Identify challenging in front of responsible and employees in building learning organization.
- F- Model designing of building learning organization for Islamic Azad University, Tabriz branch

MATERIALS AND METHODS

This research is descriptive and survey study in terms of the objective, cross-sectional study in terms of the time, applying in terms of the results, inductive in terms of the study of logic and quantitative in terms of the research process.

Research's subject scope has been around excellence and learning paradigms, spatial scope has been Islamic Azad university, Tabriz branch and research time scope has been 2011.

Study population has been officials and employees of the university with a total number of 783 patients. To determine the sample size, the Cochran formula has used and a sample size of 258 patients has calculated based on that. Sampling method has been stratified random sampling. Data collection tool, has been Armstrong-Foley's questionnaire entitled evaluation of organizational learning mechanisms based on five liker scale.

The questionnaire had four main components which have been evaluated through a total of twelve scale with 65 questions. Content validity has used to determine the research validity and considering the 5 scale questionnaire Half-split test has used to assess the reliability. Statistical calculated figures for reliability of 0.84 has been the average of this test measures for four questionnaire mechanisms. Inferential statistics to test hypotheses have been one-dimensional and binomial chi-square tests. Major limitation of the study has been using a data collection tool.

Research's Modeling Process

Modeling process consists of seven steps which can be seen in figure 1.

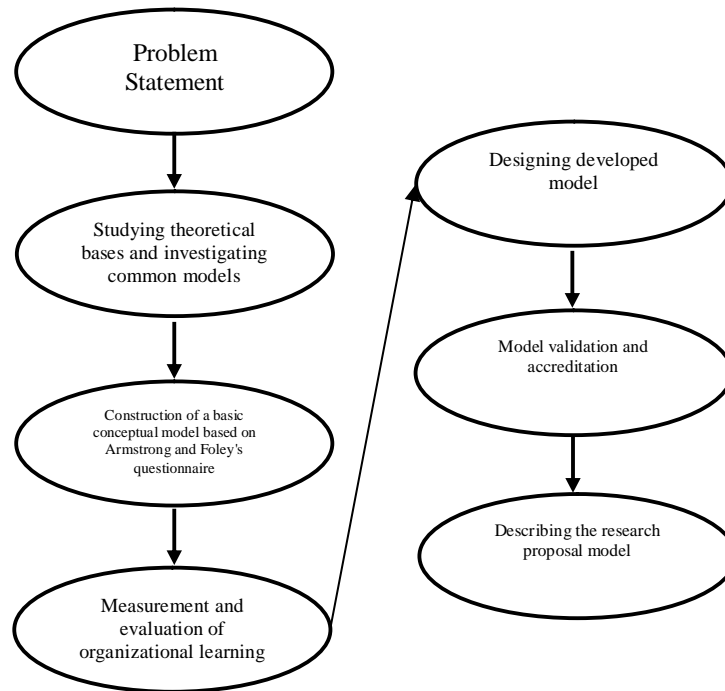


Figure 1- research's modeling Process

Findings

Major and minor hypotheses testing show that Islamic Azad university, Tabriz branch in the process of becoming a learning organization, is faced with challenges and obstacles. Approximately 85-90% of the respondents believe that mechanisms including the learning environment, identifying learning and development needs, providing learning and development needs and using learning in the campus has been lower than average.

Major Hypothesis Testing

Islamic Azad university, Tabriz branch action to become a learning organization is lower than average. According to this hypothesis, the following statistical assumptions H_0 and H_1 have arranged:

H_0 : University action to become a learning organization has been at average or higher than average level.

H_1 : University action to become a learning organization has been at lower than average level.

To test significant differences between the distribution of observed frequencies with the expected frequencies about Islamic Azad University, Tabriz branch action to become a learning organization i.e. The generalization of the frequency distribution results of the sample to population nonparametric chi-square test has used. Because of ordinal scale of data, nonparametric statistical test has been used. Since the univariate chi-square test is a nonparametric test, so it doesn't need to consider certain assumption for distribution of studied variable data in this test. But it is necessary to explain to use univariate chi-square test the existence of the following conditions must be ensured, otherwise test results would be misleading:

Expected frequency of more than 20% of houses (cases) shouldn't be less than 5.
 Expected frequency of any house shouldn't be less than 1.
 Since these conditions are provided, the univariate chi-square test has performed. Univariate chi-square test results are presented in the table 1.

Table 1- results of univariate chi-square test for action variable of Islamic Azad University, Tabriz branch to become a learning organization

Sample size	Chi-square	Degree of freedom	Significance level
163	1999.706	2	0.000

According to the above table, it can be stated that in $\alpha = \%1$ level, distribution of observed frequencies are different from the expected frequencies. Considering that 90 percent of respondents have chosen options below average, with 99% confidence it can be stated that Islamic Azad University, Tabriz branch hasn't acted to become a learning organization. Against those who are opposed to this view, binomial test has been used. Table 2 shows the results of this test.

Table 2- results of binomial test for action of Islamic Azad University, Tabriz branch to become a learning organization

Variable levels	Group	Number	Observed rate	Test rate	Significance level
The group that believe Islamic Azad university, Tabriz branch hasn't acted to become a learning organization	Those who have chosen the low or very low options.	224	0.9	0.5	0.000
The group that believe Islamic Azad university, Tabriz branch has acted to become a learning organization	Those who have chosen average, high and very high options.	24	0.1		
Total		163	1		

Since the significance level is less than 0.05 percent, the difference between the views of respondents in both groups is significant. However, the results of the major hypothesis test, is affected by the minor hypothesis test. Four minor hypotheses test based on above inferential statistics indicated that 85 to 90 percent of respondents believed that four mechanisms including the learning environment, identifying learning and development needs, providing learning and development needs and using learning in the campus has been lower than average.

DISCUSSION AND CONCLUSION

a) Strategies to Enhance Learning

- Development of organizational dialogue i.e. employees:

- To regard each other as partners.
- To accept the investigation spirit.
- To suspend their assumptions and obvious.
- To observe as a supervisor.
- To investigate gently.

Some key points to start the dialogue:

- Avoiding dialogue obstacles such as defensive, passive and competitive stance
- How to create diverse imaginations as a resource rather than as a cause of conflict root
- How to create a shared vision
- How to improve communication skills
- How to take advantage of the effective listening and knowing the importance of getting and giving feedback
- Designing progress path programs proportionate to staff capability promotion
- Designing self-breeding programs

b) Strategies to Enhance Knowledge

Knowledge should be conceptualized as:

- What knowledge: knowing the information that is needed.
- How knowledge (Technical Knowledge): knowledge of how information should be processed.
- Why knowledge: knowing why certain information is required.
- Where knowledge: knowledge of where specific information can be obtained.

- When knowledge: knowing when certain information is required.

Organizations do not need to renovate and repeat what others have discovered. Today they are trying to learn, adapt and develop. University can obtain external information by applying some of the following methods:

- Aligning with other organizations
- Attending the conferences
- Recruiting consultants
- Reading newspapers, magazines and electronic information
- Watching television, video and film
- Tracking in social, economic and technological trends
- Collecting data from customers, suppliers and other sources
- Recruiting new employees
- Collaborating with other organizations, creating allies, and joint ventures

Aligning is useful for the university in the following fields:

- Strategy determination and correction
- Continuous improvement of work processes and business systems
- Goal setting
- Problem solving
- Teaching and enriching ideas
- Comparing and evaluating market performance
- Acting as a catalyst of change

c) Strategies to Enhance Creativity and Innovation

- Encouraging employees continually to create ideas and offer suggestions
- Allocating scores to creative and innovative employees in performance evaluation
- Allocating financial and physical resources to creative and innovative employees
- Introducing creative and innovative employees in the local, provincial and national media
- Promoting social position and dignity of creative and innovative employees
- Creating of think tank and propelling employees to use it
- Creating creativity and innovation unit

Since the mechanism of applying learning in the workplace and in other words, applying knowledge in practice has evaluated in unfavorable conditions, deduction from its three scales namely applied- appropriate learning, applied-effective learning and applied learning- direct supervisor support and feedback with the relating options, will be access to a choice of three factors including learning center, motivation and technology, which have been placed in the structure of the proposed model and went on, their role in Islamic Azad university, Tabriz branch to become a learning organization have been described.

d) Creating Learning Center

Learning center can play “learning process leading” role in conducting organization transition process and their transformation from the present status to become learning organization. “learning center” has a mission to fulfill systematic and effective learning process conducting and its pervasion and development i.e. “learning process management”. Accordingly, this most important point should be emphasized that the leaders and senior managers should make efforts in recognizing and understanding the theories of organizational learning and learning organization once again, to be able to apply and implement this idea in desired way. Directors and managers view should be focused on the fact that “organizational learning” and “learning organization” theories which emphasize on learning process and learning application, are value approaches. Nature changing from “leadership by command” to “leadership by vision” is a software movement that focuses on the intellectual and behavioral development and thought and behavior dynamics of them and employees.

e) Technology

Information technology offers new strategic opportunities for learning across the company. This technology enables organizations to computerize affairs educate and transform it. Information technology provides possibility of power, performance and control redistribution for positions that will be effective. If so, production, coordination and management will be more effective.

Six main effect of information technology on work and learning environment are:

- Fundamental changes in working processes
- Integration of business functions at all levels within and among organizations
- Changes in the competitive atmosphere in many industries
- New strategic opportunities for re-assessment of organizational missions and operations

- Fundamental changes in management and organizational structure
- Organizational change by the managers

Types of learning technologies:

Learning technology includes two types of presentation technologies and distribution technologies.

Presentation technologies include:

- Electronic text or publishing: text distribution via electronic means
- CBT: computer-based training
- Multimedia: using computer for text, audio, animation and / or video tasks
- TV: one-way video that might be combined with two-way audio systems or other electronic answering systems
- Remote conferences: rapid exchange of audio, video and text between individuals or groups in two or more places
- Virtual reality: using computers to present interactive deep and three-dimensional learning experiences, by means of real and fully functional models
- Electronic performance support system: developing integrate computers by using expert systems, hypertext and hypermedia to help working tasks.

Distributed technologies include:

- Cable television: transmission of television signals through cable technology
- CD-ROM: a tool and system for recording, storage and retrieval of electronic information on CD-ROM that can be read by the optical drive.
- E-mail: exchanging messages via computer
- Extranet: collaboration network for applying internet technology to create communication between organizations and suppliers, customers or other organizations that have common goals or needs.
- Internet: free confederation of worldwide computer networks that are connected to each other through multiple networks.
- Local area network (LAN): a network of computers that shares resources of one or more processor within a relatively small geographic area.
- Wide area network (WAN): a network of computers that shares resources of one or more processor or server within a relatively large geographic area.
- Satellite TV (also called interactive business TV): television signal transmission via satellite
- Simulator: a device or system that replaces real device or system.
- World Wide Web: all sources and internet users use hypertext transfer protocol (HTTP).

f) Motivation

Matters affecting employees' learning motivation can be cited as follows:

- In addition the results, the efforts should be rewarded too.
- To improve employees' peace of mind and job, measures should be taken.
- In employee performance evaluation, skill improving, new skill acquiring, knowledge acquiring, learning developing, experiences and knowledge exchanging and applying acquired skills, be considered most important criteria.
- To create a meritocracy system, learning applying and enhancing should be considered important criteria.
- Research and internship opportunities in superior and successful companies should be provided for employees.
- Groups and teams should be benefited from the appropriate rewards due to their collective efforts.
- Individuals' increasing participation should be provided in various fields.
- Failures and mistakes shouldn't considered as individual frustration, conversely, be considered as learning opportunities.
- Measures must be taken to motivate individual sense of inquiry and curiosity
- Recreation opportunities on the job be planned with creating a calm and encouraging environment to establish discussion and idea exchange conditions and provide individuals with opportunities to be familiar with each other.
- To enhance learning, visual management is identified and used. Providing information and contents by using any drawing, picture and any type of media forms and tools will result in better and higher memorization and understanding and increases the application of learning.
- Measures must be taken to decrease and remove stress, anxiety, panic and fear of individuals for all aspects.

Based on Armstrong-Foley questionnaire components and presented arguments, development model of the learning organization in Islamic Azad University, Tabriz branch is presented as follows:

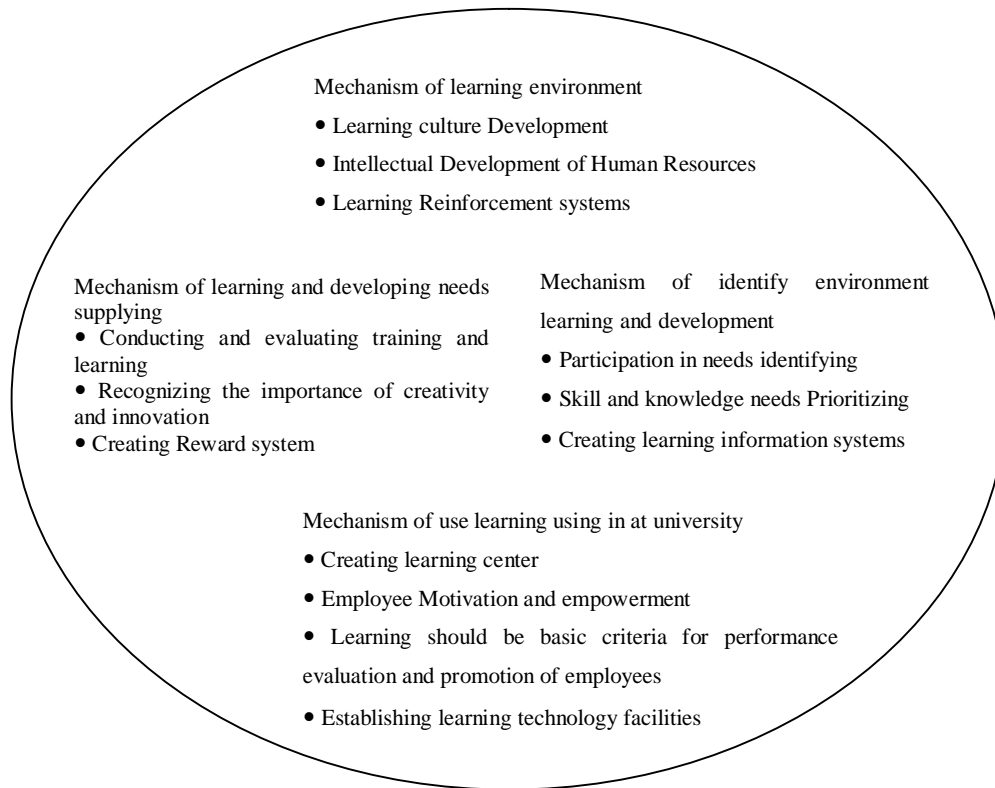


Figure 2- Building and developing model of learning organization in Islamic Azad University, Tabriz branch

What is necessary is to emphasize is the importance of this component so that must be considered simultaneously. Continuing relevance and effectiveness of these components and structures make their roles meaningful. In other words, because of persistent relationship between components, totality characteristic i.e. the incidence of the learning organization makes sense. Accordingly, the systematic view and perception of the model should be considered by university authorities and stakeholders.

Model Validation and Accreditation

In the modeling process, the most effective measure to increase the model utility is its validation and accreditation. For that matter, the views of experts and professionals are used. The primary conceptual model based on organizational learning and learning organization theories and focusing on Foley and Armstrong questionnaire has performed. Analysis of results which derived from hypotheses testing led to changes in the model structure and behavior. Also, the views of the experts were used to make reforms be adopted in deliberate and methodical way to the model. 10 management experts with PhD degree have been selected. To provide feedback, and using their views, briefly, how the develop primary conceptual model, analyzing data and achieving results together with Armstrong-Foley questionnaire have been given to these experts.

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