



To cite this document: Mehmandoust Ghamsari, Z.S., Fathi Vajargah, K., Khorasani, A., & Safayi Movahed, S. (2019). Identification and Validation of Effective Factors on the Establishment of Workplace Curriculum Model Emphasizing on Economic Development Consequences. *Urban Economics and Management*, 7(1(25)), 79-96.  
www.iueam.ir

Indexed in: ISC, EconLit, Econbiz, SID, EZB, GateWay-Bayem, RICEST, Magiran, Civilica, Google Scholar, Noormags, Ensani  
ISSN: 2345-2870

## Identification and Validation of Effective Factors on the Establishment of Workplace Curriculum Model Emphasizing on Economic Development Consequences

**Zahra Sadat Mehmandoust Ghamsari**

Ph.D. Student of Curriculum Planning, Faculty of Education and Psychology, Shahid Beheshti University, Tehran, Iran

**Koorosh Fathi Vajargah\***

Professor, Department of Education, Faculty of Education and Psychology, Shahid Beheshti University, Tehran, Iran

**Abasalt Khorasani**

Associate Professor, Department of Education, Faculty of Education and Psychology, Shahid Beheshti University, Tehran, Iran

**Saeid Safayi Movahed**

Head of Educational Supervision and Evaluation of National Iranian Oil Company, Tehran, Iran

Received: 2018/07/08

Accepted: 2018/11/20

**Abstract:** The work environment curriculum is one of the emerging disciplines of the curriculum seeking to apply the findings of this study in the work environment. This study aims to investigate the effective factors on the establishment of a work environment curriculum-model in related documents and to identify its economic consequences. For this purpose, the relevant documents have been examined from the beginning. The research population includes all published works in this field from 1993 to 2017 in eight valid databases. The content of the documents was to categorize and organize the effective factors on the deployment of the work environment curriculum using the MAXQDA18 software. Then Delphi technique was used to validate these factors. The most important factors identified are individual, background, and occupational ones. Finally, the economic growth and development consequences of the establishment of curriculum in organizations were investigated that included individual factors (improving the learning process, improving relationships with colleagues, increasing work engagement and career progression), and organizational factors (organizational learning, process improvement, product improvement, lower cost, human capital development).

**Keywords:** Validation, Work Environment Curriculum, Economic Growth, Organization

**JEL Classification:** D83, O47, O47, J01

---

\* Corresponding author: kouroshfathi2@gmail.com

## 1. Introduction

One of the most effective sources of the organization is its human resources; if they are trained and capable, they can make the organization dynamic and provide diverse resources for their organizations. By considering the hypothesis that individuals cannot be effective and efficient in their service life, given the information and skills they have learned in their formal education; therefore, the main solution for efficiency and effectiveness is “in-service training of human resources”. Training is a safe way to improve the quality of performance and solve problems of managers, and lack of it is one of the major problems of each organization and it causes the organization to degrade (Barbazette, 2006). In this regard, the purpose of any learning intervention is to prepare the staff to improve their attitude, skills and knowledge in order to enable them to perform their duties and control their challenges effectively (Sepeng & Miruka, 2013); therefore, an educational program can justify its value once it is based on the findings of the science of education; and one can seek to learn under these conditions. One of the branches of education is curriculum. Since the goal of learning curriculum is to improve learning conditions (Fathi Vajargah, 2011), examining this concept in organizational education and designing a work environment curriculum can help organizations advance their learning goals.

The emphasis on training in organizations is partly due to the acknowledgment of the crucial role of learning in the workplace and the development of professional knowledge throughout work life (Billett, 2006). By highlighting the concept of organizational learning in the

human resources literature, education and its related concepts are more important than ever. One of these concepts related to organizational education is curriculum planning. Curriculum is the organization of a series of teaching and learning activities designed to make desired changes in learner behavior and assess the extent to which these realized changes, in fact, the reputation of planning effort is the realization of learning goals, and organizational learning is considered as valuable when it comes to learning goals (Lee Utech, 2008). Without identifying, conceptualizing, and achieving a curriculum model, the work environment will not be perceived as a learning environment and will be vulnerable to harm that the learning process is pointing out and will not legitimize itself as a learning environment. Curriculum is considered as a fundamental tool in achieving the goals of organizational learning (Thornton Moore, 2004; Amin-Khandaghi, 2010).

Any curriculum follows a curriculum-planning model. Curriculum planning models provide the structure and framework for curriculum, and describe and visualize the internal relationships between programming variables as well as the relationships of variables with external factors. In a general category, planning models are linear and nonlinear (Dehghani et al., 2011). The linear patterns have successive, interconnected and related steps that are necessary to observe the order of the various stages in these models. Nevertheless, in nonlinear models of curriculum planning, there is a relationship between different stages, but there is no need for continuity and there is a possibility of change. The coordinates of these categories can be emphasized on the learning process, non-prescriptive,

emphasis on learner, and teaching dynamics. In fact, these categories of models are not considered curriculum as fixed position. In fact, these patterns allow showing their uncertainties. Learners should not return to the time before knowing. Learning outcomes are not already convergent and not specified. Only these results are new startups for new structures (Fathi-Vajargah, 2009).

Organizational education has always implicitly benefited from the concepts of linear planning, since it has always adhered to planning, implementation and appraisal processes. Among the organizational learning models that are considered linear programming, we can refer to the Parker Model, the ISO9000 standard, which, in general, predicts the stages in these patterns in accordance with the Tyler Model, including determining educational needs, designing and planning, teaching and evaluating outcomes. However, explicitly, after Nash (1993) introduced the concept of workplace programming environment, patterns were developed for work environment programming, all of which assumed linear programming assumptions.

By studying the theorems and the basic assumptions of curriculum models, it can be concluded that the linear curriculum was based on the conditions in which the philosophy of science was based on modernism. Consequently, the curriculum planners also proved that the variables involved in curriculum planning with the prediction of the elements of the curriculum and possible relationships between them were to achieve predicted and certain results. However, with changing the philosophy of science from modernism to postmodernism and the emergence of paradigms such as chaos and complexity,

we may see changes in the field of education.

The commitment of educational systems to the nonlinear programming curriculum is of utmost importance in economic organizations. This necessity can be considered from two aspects. From one hand, economic organizations are considered as key components of the development of the country, and the absence of a specific curriculum model can prevent the assurance of the huge costs that these organizations spend on training. On the other hand, most of the jobs and tasks in these organizations are project-driven and occur under strict conditions. The variability of the nature of many occupations in these organizations proves the importance of time in these categories of businesses, the short duration of each task, hard working conditions; need to design a nonlinear planning model that is designed with respect to these features.

Therefore, given the complex conditions of the job coordinates of current organizations and lack of success of the linear curriculum model in responding to the changing needs of the organizational workforce, and on the other hand, specific features that can be found for businesses in economic organizations, this research seeks to identify and validate the effective factors on the establishment of a curriculum model for the work environment and the implications of organizational growth and development if this model is deployed (Cleveland-Innes&Potvin, 2001; Billett, 1996; AminKhandaghi, 2010).

## **2- Literature Review**

### **a) Foreign Researches**

Dealtry (2009) designed and managed lifelong learning curriculum for organizations,

saying that effective factors on syllabus design in work place were prioritizing the objectives of competitive learning, the study of organizational intellectual capital, ground effects, and thinking about the best practices, the effects of the learners, the effects of virtual learning and technology, having an investment thinking or cost to personal development of the staff. The above-mentioned factors all affect the dynamic curriculum in the work environment and interact with each other.

Lee Utech (2008) explores the concept of curriculum design for teaching the environment and studies educational benefits, challenges, and principles of workplace education. Then he examined the concept of programming and its processes. In the conceptualization section of his curriculum, he has identified the needs of employees and employers as curriculum resources. Then, he points to the Adult Education Curriculum framework at the University of Massachusetts and the guidelines that this framework can provide for curriculum in the workplace.

Billett (2006) in an article entitled "constituting the workplace curriculum" argued the necessity and importance of identifying, interpreting and expressing the principles of the work environment curriculum and said that this need is partly due to the acknowledgment of the role of the work environment in the initial learning and professional development of individuals. In his view, without identifying, conceptualizing and expressing the principles of the workplace curriculum, the work environment is subverted and the legitimacy required as a learning environment will not be achieved. In this research, effective factors on the work environment curriculum, including upcoming expectations, beliefs

about employee learning, employee thinking, age, gender, race, part-time or full-time employees, etc. are among the factors that influence the environment curriculum.

Thornton Moore (2004) in an article titled "curriculum in the workplace" presented a learning perspective as learning environment. The concept of work curriculum can be used effectively in the learning process in the workplace. This essay first reviews the concept of curriculum, and then applies theories of cognition and learning in phenomenology and symbolic interactions, and situational learning to identify some of the programmatic characteristics in the workplace. These features are divided into three general categories: the individual characteristics of the participants, the organizations' internal feature and the external environment specifications; and, of course, the author acknowledged that these three factors always interact dialectically.

Cleveland-Innes & Potvin (2001) in "Curriculum in the workplace: Beyond collaborative design to shared praxis" initiated that how the work environment is created, how it develops and how it is evaluated. According to the authors, the workplace curriculum is related to the formal education system in the workplace, which teaches how to work, through work and for work. These trainings are aimed at moral, mental, and aesthetic improvement, and its differentiation with other curricula is aimed at realizing the outcomes of work. Ultimately, it is acknowledged that curriculum related to the workplace are borderless and all organizational members, such as educational professionals, managers and learners, should all participate in its development and all organizational

opportunities should be considered as a learning situation.

Billett (1996) in a research entitled “towards a model of workplace learning: the learning curriculum. Studies in continuing education” acknowledged that to understand the nature of learning in work environments, we need to look at learning as a unit of curriculum, learning experiences that engage employees in the process of learning every day should be understood as the goal-oriented activities that lead all employees to learning. He outlined the purpose of presenting the paper to provide a model for learning curriculum in the workplace, a model in which learning should be placed instead of teaching at the center of the concept of curriculum. Despite the presence of learning in the center of the model, these goals are considered to be important (not learner) and goal-oriented learning is the goal of the authors of the article. In addition, since always the previously set goals are not achieved, the instructor or teacher must always facilitate the learning flow and the avoid deviation goals.

#### ***b) Iranian Researches***

Doosti-Hajabadi et al., (2017) did a research entitled “conceptualization of the curriculum of the workplace as a neglected or emerging discourse in a descriptive qualitative and phenomenological way.” The work environment curriculum is a phenomenon that depends on the context, the text, and the maturity of organizations, and includes a set of discussions that should be interpreted in different contexts because in the discursive production process, some discourses are banned or suppressed, and others are accepted. On the one hand, the difference in the context, the realms and the specific

discourses leads to the formation, and even transformation of the curriculum discussions in the workplace. What is evident in this process is the existence of a work environment curriculum as a neglected process beyond which any discourse has another discourse.

Farzadnia (2016) designed a workplace curriculum with the competency approach in training and improving the project managers of Pars Oil and Gas Company and concluded that a competency-based curriculum is about this concept and the implications of needing and targeting the selection and designation of the necessary competencies of the organization, the curriculum content is designed to integrate knowledge and competency-building skills, is tailor-made and based on the competency level of learners. Experts from organizations and learners have a significant and important role to play in all stages of the process, and their views are taken into account. In other words, the curriculum is based on the competency of design, implementation, learning and evaluation of participation, and it requires the cooperation of learners, managers and organizational professionals.

Amin-Khandaghi (2010) in an article entitled “An Analysis of the Importance and Application of Scientific Achievements in the Curriculum Field in the Educational Systems of Industrial Enterprises: Opportunities and Threats” investigated epistemic dimensions of curriculum among the training companies of industrial companies in Mashhad systematically. The research method is descriptive survey type. The statistical population of this study was all managers and expert of educational centers of large industrial companies of Mashhad. The results indicate that the field of curriculum evaluation has been

most important from the point of view of planning specialists, and then the field of policy making, planning, designing and implementing curriculum, programming theory, philosophy, research, and programming history. Concerning the application of epistemic aspects of curriculum knowledge, the results indicate that the use of curriculum dimensions is very weak and the use of curriculum knowledge in the sample is neglected.

### 3- Theoretical Background

As stated, organizational education is almost 70 years old and has experienced many models and patterns. The curriculum planning was introduced as a concept from the 90s of the twentieth century. In fact, work environment curriculum, after the emphasis on organizational learning and lifelong learning, was raised by thinkers such as Nash and Lee Athei, with the ideas of Billet, Belfiour, and Thorton Moore, and so on.

The term curriculum is derived from the Latin “currer” root, which means the path to be pursued to reach the intended purpose (Marsh & Willis, 1995). It has been interpreted in learning environments as a way for learners to achieve learning goals. According to many thinkers in the field of education, learning (as a curriculum purpose) does not occur unless the learner actually uses what he has learned, and this is important in the true sense of the workplace (Thornton Moore, 2004). Consequently, curriculum, when interpreted in educational institutions, is not just a subject for which the learner learns and proves his learning by passing a test, it can be said that the learning takes place in its original form in the workplace. Thus,

curriculum is more enriched in the workplace (Billett, 2006).

In fact, on the one hand, social, economic, cultural and political developments in the 89s and 90s led the organizations to equip themselves with new tools to deal with the problems and to adapt to their new circumstances, which is nothing more than “learning.” In fact, the continuity of activity each organization depends on (Thornton Moore, 2004). Learning is the process of relatively stable change in the potential of experience; the purpose of organizational learning is the type of learning that occurs to individuals through the occupation of an organization. On the other hand, the ultimate goal of planning is to “learn” individuals. The intersection of these two concepts is the creator of the workplace curriculum and it requires the necessity of conceptualization, identification of the principles and dimensions of the work environment of the workplace. In fact, without identifying, conceptualizing and recognizing the workplace curriculum, the work environment will not be recognized as a learning environment and will not achieve legitimacy (Billett, 2006). The work environment curriculum is a systematic and proactive process designed to facilitate organizational learning. The purpose of the curriculum of the work environment is to increase the effectiveness and welfare of individuals and organizations and its range includes knowledge levels, skills and attitudes toward career, personal and social staff (Billett, 2006; Thornton Moore, 2004; Nash, 1993). There are also various scholars of proposed curriculum in the range of academic curriculum including formal, informal, implicit (Thornton Moore, 2004), intended, implemented, and experienced for the work environment

curriculum (Billett, 2006). The views of different thinkers in the field of work planning curricula are discussed.

#### **4- Research Methodology**

In the first part (first and third questions), in order to identify the effective factors and the consequences of the establishment of the work environment curriculum, written documents were examined. To achieve a comprehensive look at studies in the field of work environment curriculum, the authors of this study have sought to review systematically the content of research carried out around the work environment curriculum and to this end, method of synthesis research was used. Therefore, this paper has been conducted with the aim of studying and analyzing published scientific works in the field of work environment curriculum and its effective factors and expected economic outcomes and, finally, providing a working environment curriculum. The statistical population of all works available during the period 1993 to 2018 is Springer Link, Taylor & Francis, Pubmed, Wiley, Ebsco, Proquest, Erik and Emerald Insight databases. Selected works were studied through three stages of study, including 36 scientific papers 28 papers, 5 books and 3 theses in the field of workplace curriculum, which have been examined through thematic methodological

synthesis. It attempts to collect all relevant resources in this area, which is presented in Table 1.

In the second part (second questions), the desirability or inappropriateness of these indices was determined by the opinion of the economists and academic and organizational professors. Therefore, the research method in the first section is documentary analysis and in the second part, Delphi. The basis of the Delphi technique is that the opinion of experts in any scientific realm is the most predictable of the future (Rowe & Wright, 1999). Therefore, unlike in survey research methods, the credibility of the Delphi method is not the number of participants in the research, which depends on the scientific credibility of the participating practitioners. The participants in the Delphi research include 5 to 20 people. The minimum number of participants depends on how the research methodology is designed. In this way, the panel(s) of experts is formed. The internal communication of the participants is anonymous and their opinions, forecasts and desires are not attributed to their providers. The information is published without the identity of the providers. In this research, 19 students were selected as the statistical sample using a purposeful sampling from among university professors and experts.

**Table1. Documents in the Work Environment Curriculum**

| Row | Format                | Title/ subject                                                                                                                        | Year  | Author                    |
|-----|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------|
| 1   | Thesis                | Curriculum Models for Workplace Education                                                                                             | 1993  | Nash                      |
| 2   | Article               | Workplace learning: its potential and limitations                                                                                     | 1995  | Billett                   |
| 3   | Article               | Towards a model of workplace learning: the learning curriculum                                                                        | 1996  | Billett                   |
| 4   | Book                  | Understanding Curriculum Development in the Workplace                                                                                 | 1996  | Belfiore                  |
| 5   | Article               | Developing a curriculum for organizational learning                                                                                   | 1998  | Teare                     |
| 6   | Article               | Guided learning at work                                                                                                               | 2000  | Billett                   |
| 7   | Book                  | Learning in the workplace                                                                                                             | 2001a | Billett                   |
| 8   | Article               | Learning through work: workplace affordances and individual engagement                                                                | 2001b | Billett                   |
| 9   | Article               | Curriculum in the workplace: Beyond collaborative design to shared praxis                                                             | 2001  | Cleveland-Innes & Potvin  |
| 10  | Book                  | Supporting workplace learning for high performance working                                                                            | 2002  | Ashton & sung             |
| 11  | Article               | Workplace learning and learning theory                                                                                                | 2003  | Illeris                   |
| 12  | Article               | Workplace learning by action learning: a practical example                                                                            | 2003  | Miller                    |
| 13  | Article               | Curriculum at work: An educational perspective on the workplace as a learning environment                                             | 2004  | Thornton Moore            |
| 14  | Article               | The workplace learning cycle: A problem-based curriculum model for the preparation of workplace learning professionals                | 2004  | O'Connor                  |
| 15  | Article               | Informal learning in the workplace                                                                                                    | 2004  | Eraut                     |
| 16  | Article               | Managerial culture, workplace culture and situated curricula in organizational learning                                               | 2006  | Raz & Fadlon              |
| 17  | Article               | The role of curriculum in organizational significant change planning                                                                  | 2006  | Chrusciel                 |
| 18  | Article               | Constituting the workplace curriculum                                                                                                 | 2006  | Billett                   |
| 19  | Article               | Goal rationalities as a framework for evaluating the learning potential of the workplace                                              | 2007  | Nieuwenhuis & Van Woerkom |
| 20  | Book                  | Emerging perspectives of workplace learning                                                                                           | 2008  | Billett & et al           |
| 21  | Article               | Contextualized Curriculum for Workplace Education; An Introductory Guide                                                              | 2008  | Lee Utech                 |
| 22  | Article               | Workplace learning: Emerging trends and new perspectives                                                                              | 2008  | Fenwick                   |
| 23  | Article               | A proposed conceptual framework of workplace learning: Implications for theory development and research in human resource development | 2009  | Jacobs & Park             |
| 24  | Article               | The design and management of an organization's lifelong learning curriculum                                                           | 2009  | Dealtry                   |
| 25  | Article               | Workplace 'learning' and adult education: Messy objects, blurry maps and making difference                                            | 2010  | Fenwick                   |
| 26  | Article               | Stimulating the innovation potential of 'routine' workers through workplace learning                                                  | 2010  | Evans & Waite             |
| 27  | Article               | Building a competency-based workplace curriculum around entrustable professional activities: the case of physician assistant training | 2010  | Mulder & et al            |
| 28  | Article               | Workplace learning a sensitive matter?                                                                                                | 2010  | Van Dellen & Greveling    |
| 29  | Article               | The evaluation of learning and development in the workplace                                                                           | 2010  | Mavin & et al             |
| 30  | Article               | Self-regulated workplace learning                                                                                                     | 2012  | Siadaty & et al           |
| 31  | Article               | Curriculum development for the workplace using entrustable professional activities (EPAs)                                             | 2015  | ten Cate & et al          |
| 32  | Doctoral dissertation | In what ways does the workplace influence trainee learning?                                                                           | 2015  | Melick                    |
| 33  | Article               | A Workplace Curriculum and Strategies to Enhance Learning Experiences for Machining Workers                                           | 2016  | Yunus & et al             |
| 34  | Thesis                | Capacity Development and Workplace Learning                                                                                           | 2017  | Ahmadi                    |
| 35  | Article               | Conceptualization of the work environment curriculum discourse; Emerging or neglected discourse                                       | 2017  | Doosti et al              |
| 36  | Book                  | The Orthopedic Educator                                                                                                               | 2017  | Dougherty & Joyce         |

## 5- Results

First question: What are the effective factors on the establishment of a work environment curriculum for economic development of organizations based on studies?

To examine the first question, all theoretical and empirical texts in the field of work environment curriculum were reviewed. Due to the differences in the effective factors on the design of the work environment curriculum in the research records, these dimensions were materially interconnected. Therefore, after reviewing the theoretical and experimental texts, three main factors of individual, educational and technology were identified, each of which had sub-indicators (Table 2). Study of related studies in the work environment curriculum has shown that various factors affect the work environment curriculum.

Thornton Moore (2004) considers the dialectical interaction of the agents within the organization, the outsourcing, and individual characteristics of the working environment curriculum. Nieuwenhuis & Van Woerkom (2007) argued that the most important effective factor on the work environment curriculum is the learning logic in the organization. Billett (2001a) regards leadership style as the most important factor in the work environment curriculum. Billett (2006) argues that the type of product and process of production are effective in the elements and processes of the work environment curriculum. Researchers have identified different factors about the effective factors on the work environment curriculum, which are briefly summarized in Table 2.

**Table2. Documents in the Work Environment Curriculum**

|    |                      | <b>Effective factors on work environment curriculum</b>                    | <b>References</b>                                                                    |
|----|----------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1  | Contextual factors   | Organization Structure                                                     | Ashton & Sung (2002), Lee & et al (2004), Thornton Moore (2004)                      |
| 2  |                      | Management and leadership style                                            | Teare (1998), Lee Uteach (2008)                                                      |
| 3  |                      | Organizational Culture                                                     | Teare (1998), Lee Uteach (2008), Ahlgren & et al (2007)                              |
| 4  |                      |                                                                            |                                                                                      |
| 5  |                      | Organizational policies                                                    | Teare (1998), Isidro-Filho & et al (2013), Ten Cate & et al (2015)                   |
| 6  |                      | Business relationships with similar organizations                          | Thornton Moore (2004), Mulder & et al(2010)                                          |
| 7  |                      | Learning logic in the organization (why learning in the workplace)         | Nieuwenhuis & Van Woerkom (2007), Billett (2006), Fenwick (2008)                     |
| 8  | Occupational factors | The director's response to employee learning                               | Van Dellen & Greveling (2010), Melick (2015)                                         |
| 9  |                      | Human Resources Management Processes                                       | Mavin & et al(2010), Ten Cate & et al(2015)                                          |
| 10 |                      | Nature and production process                                              | Billett(2001a), Billett (2001b), Ten Cate & et al (2015)                             |
| 11 |                      | Cognitive Level of Tasks                                                   | Ashton & Sung (2002), Siadaty & et al (2012), Ahmadi (2017), Ten Cate & et al (2015) |
| 12 |                      | Occupational environmental conditions                                      | Silverman (2003), Billett (2006)                                                     |
| 13 |                      | The degree of job dependence on technology                                 | Teare (1998), Fenwick (2008), Hulsbos (2016)                                         |
| 14 |                      | Professional communication tasks                                           | Ahmadi (2017), Miller (2003)                                                         |
| 15 |                      | The pace of job changes                                                    | Illeris (2003), Doosti et al (2017)                                                  |
| 16 | Individual factors   | Personality of employee learning                                           | Mulder & et al(2010), Belfiore (1996), Silverman (2003)                              |
| 17 |                      | Confidence in employee learning                                            | Ahmadi (2017), Fontana & et al (2015)                                                |
| 18 |                      | Employee Learning Motivation                                               | Van Dellen & Greveling (2010), Yunus & et al (2016)                                  |
| 19 |                      | Previous employee training experiences                                     | Jacobs & Park (2009), Van Dellen & Greveling (2010), Mavin & et al (2010)            |
| 20 |                      | Staff learning style                                                       | Billet & et al (2008), Lee Uteach (2008)                                             |
| 21 |                      | Individual employee characteristics such as gender, age, race or ethnicity | Ahmadi (2017), Billett (2001a)                                                       |

Second question: The second question of the research was that to some extent are the effective factors on the establishment of the model of work environment curriculum for economic development of organizations valid?

The analysis shows that among the effective factors on the work environment curriculum, the learning logic indicators in the organization (why education in the workplace) agree with 18 opinions and the organizational structure index with 17 agreed by experts identified as the important indicators for effective working environment curriculum in organizations. Moreover, organizational policy index was not recognized valid by experts (Table 2).

Moreover, the analysis shows that among job effective factors on the work environment curriculum, the indicators of the degree of dependence of the job on technology and the level of cognitive performance of the tasks with 16 consensus

views by experts were the most important occupational effective factors on the environment curriculum in organizations. In addition, the indicators of the manager's response to employee learning, human resource management processes such as performance appraisal, human resource planning, and the speed of job change were not recognized valid by professionals (Table 2).

Additionally, the analysis indicates that among personal effective factors on the work environment curriculum, the personality traits of employee' learning and past employee training experience index, with 14 opinions agreed by experts are the most important individual effective indicators on the work environment curriculum in organizations. Self-confidence index in the learning of employees was not recognized valid by experts. (Table 3).

**Table3. Examination of the effective indicators on the work environment curriculum from specialists' viewpoint**

|                      | Effective indicators on the work environment curriculum                    | Frequency |         |          |
|----------------------|----------------------------------------------------------------------------|-----------|---------|----------|
|                      |                                                                            | Agree     | No idea | Disagree |
| Contextual factors   | Organization Structure                                                     | 17        | 2       | -        |
|                      | Management and leadership style                                            | 15        | 3       | 1        |
|                      | Organizational Culture                                                     | 16        | 1       | 2        |
|                      | Organizational policies                                                    | 7         | 1       | 11       |
|                      | Business relationships with similar organizations                          | 14        | 2       | 3        |
|                      | Learning logic in the organization (why learning in the workplace)         | 18        | 1       | 1        |
| Occupational factors | The director's response to employee learning                               | 5         | 2       | 12       |
|                      | Human Resources Management Processes                                       | 4         | 4       | 11       |
|                      | Nature and production process                                              | 13        | 4       | 2        |
|                      | Cognitive Level of Tasks                                                   | 16        | 2       | 1        |
|                      | Occupational environmental conditions                                      | 5         | 4       | 10       |
|                      | The degree of job dependence on technology                                 | 16        | 1       | 2        |
|                      | Professional communication tasks                                           | 13        | 3       | 3        |
|                      | The pace of job changes                                                    | 6         | 4       | 9        |
| Individual factors   | Personality of employee learning                                           | 14        | 3       | 2        |
|                      | Confidence in employee learning                                            | 8         | 1       | 10       |
|                      | Employee Learning Motivation                                               | 12        | 6       | 1        |
|                      | Previous employee training experiences                                     | 14        | 3       | 2        |
|                      | Staff learning style                                                       | 10        | 4       | 5        |
|                      | Individual employee characteristics such as gender, age, race or ethnicity | 12        | 5       | 2        |

Third question: The third question of the research was “What are the economic implications of establishing a curriculum model in organizations?”

American United Way (1996) defines outcome as “the benefits that attendees get when attending or after attending a program that may have relevance to knowledge, skills, attitude, and value, behavior, conditions or communication status.” UNTP (2002) defined consequence as developmental changes between input and effect completion (Sharifi, 2010). In general, the consequence is to answer the question of what difference makes the curriculum in the work environment factors. The implications of the proposed documents are the implications of the work environment curriculum at both individual and organizational levels, which would allow organizations to grow and develop economically and achieve organizational goals.

Individual outcome: A review of studies has shown that, at the individual level, the consequence is “improving the process of individual learning,” “increasing job accountability,” “improving relationship with colleagues” from the curriculum of the work environment. Learning refers to the dynamic relationships between employees as the main actors and others that change the knowledge, skills and attitudes associated with the task and occupation of individuals. Learning includes formal and informal learning (Teare, 1998), and the task of the workplace curriculum is to identify and plan all the situations that provide employee learning (Fenwick, 2008). One of other individual outcomes of the other curriculum is the work environment and the reactions that occur during learning for individuals. When individuals learn in

a group, “we” is formed among them, which leads to organizational commitment.

Organizational outcome: At the organizational level, the consequences of “organizational learning”, “process improvement”, “product improvement”, “cost reduction” and “human capital development” are outlined in the work environment curriculum. Organizational learning is the ability of an organization as a whole to detect and correct errors and to change the organization's knowledge and values so that new problem-solving skills and new capacity for work can be created. The work environment curriculum creates organizational learning by transforming the actions and reactions of individuals into the organization as learning opportunities (Fenwick, 2008; Van Dellen & Greveling, 2010). Moreover, one of the other outcomes is to improve the process and consequently the product (Yunus & et al, 2016). In addition, if an organizational training program is designed based on the curriculum coordinates of the work environment, it will reduce organizational costs (Cleveland-Innes & Potvin, 2001); and one of the long-term outcomes of the curriculum is the development of the human capital of the organization (Yunus & et al., 201 ; Van Dellen & Greveling, 2010; Jacobs & Park, 2009; Billett, 2000).

## **6- Conclusion and Discussion**

Work environment curriculum is a concept that has been developed to utilize the findings of the curriculum as one of the branches of teaching science in the field of workplace education, including production, distribution, and service organizations. In spite of studies conducted on an international scale around this concept, domestic studies do not have sufficient

richness. In this study, in order to achieve a comprehensive view of the studies on the work environment curriculum, by systematically examining the content of research done around the work environment, the effective factors on the work environment curriculum were categorized into three groups of contextual, occupational and individual factors. In addition, the economic implications of the establishment of this type of planning in the organizations were studied.

### ***Contextual Factors***

In this regard, the contextual factors are ones that do not directly affect the phenomenon of the work environment curriculum, but are factors that affect other factors (occupational and personal) and interact with other factors in the work environment curriculum. In general, effective contextual factors on the work environment curriculum were approved by the experts. It consists of five basic themes that include organizational structure, management style and leadership, organizational culture, business relationships with similar organizations, and learning logic in an organization.

Organizational structure is the way in which organizational activities are organized and coordinated. An organizational structure specifies which tasks to be assigned, whom to report to, and which are the formal coordination mechanisms, as well as the organizational interactive patterns to be followed. The organizational structure of the different organizations varies because the environmental conditions and the goals pursued by the organizations are different and therefore require a different curriculum to facilitate the learning process. In this regard, Ashton and Sang (2002) state:

“All organizational training models designed to enhance the quality of organizational learning will result when applied in an appropriate organizational structure, activities such as quality rings or comprehensive quality management when used in a vertical structural system with traditional management and top-down control will be failed... Learning in current organizational systems is part of a work activity, and organizations with a horizontal structure are more successful in doing so ... The organizational structure is considered an essential part of organizational learning.”

Thornton Moore (2008) also analyzes the role of organizational structure in the workplace curriculum. He states, “The organizational structure, management style, the way of cooperation, participation and knowledge sharing determines that individuals have a dynamic and/ or passive role in terms of the elements of the work environment curriculum and welcome them. The organizational structure also identifies the type of formal relationship and influences informal relationships. Hence, it determines which methodology workshop curriculum is used to facilitate learning.”

Lee et al., (2004) argue that “learning involves the following organizational factors: 1. The hierarchical structure of tasks; 2. Job design and how the creators move in the organization; 3. The organizational decision about learning and its importance in the organization; 4. Decision about reward system”.

Leadership style is the second basic code that influences the work environment curriculum. Lee Utech (2008) uses the title of the employer and acknowledges, “The employer may want to increase or decrease the communication with customers,

increase or decrease their skills. Generally, he may be about to empower employees or not.”

Teare (1998) points to the manager’s supporting behavior. He acknowledges, “Supporting leadership behavior is such that learning and participation in the learning curriculum in the workplace is regarded as a measure of appointment and promotion ... The supporter’s style of courageous manager, risk-taking and empowerment encourage employees ... The test permits new practices and accepts subordinate mistakes... The leader may have an open mind about own learning and his subordinates, or vice versa.”

The third contextual effective factor on working environment curriculum is organizational culture. Organizational culture is called a set of values, guidance beliefs, understandings, and methods of thinking that is shared among members of the organization and is also searched by the new members as the proper way of doing things and thinking. Organizational culture includes the norms (O'Connor, 2004), symbols, roles (Raz & Fadlon, 2008; Illeris, 2003), insights and values (Chrusciel, 2006). In this way, in an organization with a culture that transfers into learning, people naturally speak about learning. In this way, learning becomes part of everyday work of the staff. Since intra-organizational culture as well as wider culture leads people to learning, individuals take on personal responsibility for their learning and development, and the environment provides a variety of types of assistance freely.

Ostendorf & Permpoonwivat (2017) argue, “Essentially, learning from a social type depends on culture. If we are to create a workplace as a learning environment,

we should not be tamed to values, norms of behavior ... When we speak of the importance of culture in learning people, it is not just the culture within the organization, but the rituals, values and norms outside the organization’s boundaries are also influential.”

The impact of a wider culture on concrete work environment curriculum may be unclear. The wider culture refers to the patterns of social relations, beliefs, and even social history in which the organization operates. As Thornton Moore (2004) refers that, “Perhaps the hands of the dead from the past has the same role as the interactions of the employees of an organization, the perception, the relationship and the set of factors that contribute to the curriculum of the workplace and its formation.”

The market relations point to the position of the organization in the market and the types of communications that it creates for the organization. These relationships can be clearly visible on the nature of the use of knowledge in the organization, the learning of organizational staff at all levels and, consequently, on the work environment curriculum (Thornton Moore, 2004; Cleveland-Innes & Potvin, 2001). In this regard, according to Thornton Moore (2008), these relationships can be either real or legal factors: financial suppliers, customers, finances, competitors. These relationships can be evident in the nature of the use of knowledge in the organization, the learning of organizational staff at all levels and, consequently, on the work environment curriculum. For example, economic pressures may force investors in education to minimize educational costs.

Learning logic in the organization was also one of the factors that most experts approved. Learning logic is, in

fact, a response to questions raised about the teaching of the workplace. The learning logic in each workspace emanates from the macro enterprise policy and the view of managers toward learning the workplace (Nieuwenhuis & Van Woerkom, 2007). Learning logic is in fact a response to the questions posed by the teaching of the workplace. When the main activity of training employees is to prepare newly recruited staff to enter or prepare a new strength for the acceptance of new tasks, the learning log is “preparation.” While in some cases, the organization’s macro policy is in the interest of the organization’s continuous dynamism and continuity, and thus, in all circumstances, it seeks to create an opportunity for learning. In this context, learning logic will be “optimization” (Billett, 1996). In situations where the organization experiences changing conditions, learning logic will be “change.” Therefore, the organization’s macro policy will accept the change from organizational learning outcomes (Evans & Waite, 2010). The goal in this logic is also vitality and competition with competing organizations. Some of the leading organizations also see their dynamism as the result of the dynamics of the organization’s employees, and allows its employees to pursue their goals of personal learning by following the goals of the organization. As the name implies, the “individual development” is the goal. In the end, there are organizations that generate, distribute and benefit from knowledge of their nature. In such environments, the “coexistence between knowledge and work” is quite evident, and perhaps the learning opportunity cannot be separated from the job process (Nieuwenhuis & Van Woerkom, 2007).

### ***Occupational Factors***

Occupational factors are those factors that directly relate to the nature of the job and the type of duties and responsibilities of the individual in a job position. The basic components associated with this factor, endorsed by the experts, include the four “nature and process of production,” the “level of cognitive tasks,” “the degree of dependence on the job of technology” and “professional communication of tasks.”

The nature and process of production refers to the process that the organization provides goods or services. This process builds on the experiences of staff as learners and their knowledge. As learning is a concept that affects both production and output itself, the curriculum is heavily involved with this subject. According to Billett (2001a), the nature of the duties of each person in the job position provides opportunities for learning; the planner must pay attention to what these opportunities are and how it can be expanded. Certainly, learning opportunities for a job assembler vary with the opportunities of learning a system programmer. Some jobs are constantly changing, so the person who takes that job is constantly learning. According to Billet (2001b), the effective factors on the creation of the opportunity to learn the work environment from an organization or firm include the size and scope of the firm, the type of occupation, the firm’s readiness to provide guidance.

Regarding the cognitive level of tasks, when it comes to Bloom’s cognitive levels in the workplace, the level of “pragmatics” comes to mind. However, the fact is that the nature of job duties involves different levels of cognitive goals. According to Ashton & Sang (2002), the design of work environments should be such as to support cognitive

development, practical experience and intelligence of employees. The nature of some jobs requires thinking, action, and learning, but in other occupations, the person planning the learning process should work with the change in the work processes of the cognitive conflict of employees. In addition, Siadotti et al. (2012) described self-regulation learning as an effective strategy for learning the work environment, and argued that the nature of jobs requiring analysis and tasks and processes has improved self-regulation learning. Experimental results support this claim. Planning, monitoring, and reflection are the three main steps of self-regulation learning, and practical experience shows that tasks that have more cognitive complexity can better apply these steps. In the following, Ahmadi (2017) states that if tasks are very easy and much more difficult than the cognitive ability of the staff, then learning cannot be expected. Challenges are so effective that one can overcome them by moving on to growth.

The degree of job dependence on technology is the content of another base derived from the analysis of studies and documents. In this regard, according to Teare (1998), businesses that deal with technology, particularly information technology (IT), provide employees with facilities such as individuals can communicate electronically with each other, and these communications give opportunities to them to learn; individuals can easily access internal and external information resources; the experiences and knowledge of the past are easily accessible; individuals can use interactive e-learning opportunities; because the nature of technology is constantly changing, people have to learn continuously and revise their previous lessons.

In addition, the quality and quantity of professional communication is also one of the influential factors in the work environment curriculum approved by the experts. According to Ahmadi (2017), the purpose of the professional communication is meetings, visits, and structural connections. Professional communication is one of the most influential factors in learning the work environment. Undoubtedly, the educational planner should pay attention to the amount and quality of these communications. Communication with knowledgeable and informed people is a learning opportunity itself.

#### ***Individual Factors***

The review of the experts' opinions suggests that among the effective factors on the work environment curriculum can be categorized in the five themes of the "employee learning personality", "employee learning style", "employee learning motivation", "past employee training experiences" and "individual characteristics such as gender, age, and race."

The personality of each individual influences his values, attitudes, emotions and behaviors. Therefore, it will be different in terms of personality traits, learning opportunities and working environment curriculum. Personality factors such as neuroticism, extraversion, openness or flexibility, consistency, and deontology are among the factors influencing the type and nature of the curriculum (Melick, 2015).

According to Belfiore (1996) since learners in the work environment are adult, attention is drawn to their emotional, personality and psychological characteristics, and because of the diversity of adult learners in these cases, self-directed and person-centered learning is the best option for them.

Learning style of the staff is another concept that affects the work environment curriculum. Learning styles include beliefs, preferences and behaviors that individuals use to help them learn in a particular situation. Therefore, curriculum planner cannot prepare steady learning opportunity without paying attention to individuals' learning style because even with the fixing other factors, different results can be expected in employees (Billett, 2006; Belfiore, 1996; Billet & et al, 2008). Moreover, Lee Utech (2008) proposes sets out different employee learning styles as a challenge. He believes that audiences of courses are multi-level in an organization. Therefore, one cannot use the same learning methods for everyone. Different learning styles make different outcomes from the same training program since a learning style is functioning for some learners and not for another.

Learning motivation is another subject basis that studies referred to and endorsed by the experts. In this regard, Van Delaneh & Grilling (2010) differentiate between the motivation of learners in compulsory and on-the-job learning. In their opinion, the incentives for participating in compulsory training courses include training courses, a tool for survival in the job, financial incentives, spending time, help with job development, promotion, and escape from employers' punishment. Nevertheless, the motivation to participate in work-based learning activities include enjoying, believing that there are real benefits, people learn to help work, and the best place to improve the knowledge and skills associated with their work is work environment itself, and the instructor understands the true meaning of the work. Of course, these incentives are different in different work environments.

Previous education staff experiences also refer to the background of previous education both at work and outside the workplace. The previous experiences of the person actually brought the person to the learning position. Jacobs & Park (2009) proposed a 3D model of a variety of learning opportunities designed in the work environment curriculum. These dimensions include the learning location, the level of planning, and the role of learner and instructor. In other words, different learners have a variety of training histories, usually those who have completed their university education at high levels and then entered the work environment, they somehow are resistant to new and especially informal learning in the workplace. However, these people can bring some kind of innovation for an organization. In addition, successful and unsuccessful learning experiences in practice can be effective in this regard. Mavin et al, (2010) refers to the role of learners in assessing work environment learning and argued that it should be kept in mind that, people's thoughts were taken into account from the learning process and their previous experiences in this field (learners' features). Educational planners in the organization should strive to create positive experiences for learning in an organizational audience ... because these learning experiences affect their willingness to learn in the future and affect the creation of learner staff.

Finally, the basic content of features such as gender, age, and race has been observed in some studies. Ahmadi (2017) states that female participants in this study (Development of Workplace Learning Capacities, Analysis of effective Factors on Work Environment Learning at the Ministry of Education of Afghanistan)

gender was an important factor in workplace learning and pointed out that work curriculum planner should focus on heterogeneous age groups in designing learning opportunities so that they could have wider learning outcomes as a result of the dynamics created among individuals in a group.

Finally, the expected outcomes of the work environment curriculum include both “organizational” and “individual” aspects. Individual outcomes include improving the learning process; improving relationships with colleagues, increasing affiliation and career advancement, and organizational implications include organizational learning, process improvement, product improvement, cost reduction, and human capital development. It is important to pay attention to the implications of the establishment of a work environment curriculum for the organization’s development. Because, as mentioned earlier, this program provides optimal and cost-effective production and avoids the costs of non-educational planning and it provides a return to investment in education with the proper targeting.

## 7- References

- Ahlgren, L., Riddell, S., Tett, L., & Weedon, E. (2007). *Experiences Of Workplace Learning In Smes: Lessons For Good Practice*.
- Ahmadi, M. J. (2017). Capacity Development and Workplace Learning: An Analysis of Factors Influencing Workplace learning at Afghan Ministry of Education, Department of Planning.
- Amin-Khandaghi, M. (2010). An Analysis of the Importance and Utilization of the Scientific Achievements of Curriculum in Educational Systems of Industrial Companies: Opportunities and Threats, *Journal of Iran Curriculum studies*, 5(19), 139-169. (In Persian).
- Ashton, D. N., & Sung, J. (2002). *Supporting workplace learning for high performance working*. International Labour Organization.
- Barbazette, J. (2006). *Training needs assessment: Methods, tools, and techniques* (Vol. 1). John Wiley & Sons.
- Belfiore, M. E. (1996). *Understanding Curriculum Development in the Workplace. A Resource for Educators*. ABC Canada, 1450 Don Mills Road, Don Mills, Ontario M3B 2X7, Canada.
- Billett, S. (1995). Workplace learning: its potential and limitations. *Education+ Training*, 37(5), 20-27.
- Billett, S. (1996). Towards a model of workplace learning: The learning curriculum. *Studies in continuing education*, 18(1), 43-58.
- Billett, S. (2000). Guided learning at work. *Journal of Workplace learning*, 12(7), 272-285.
- Billett, S. (2001 a). *Learning in the workplace: Strategies for effective practice*. Allen & Unwin, PO Box 8500, St Leonards, 1590 NSW, Australia.
- Billett, S. (2001 b). Learning through work: workplace affordances and individual engagement. *Journal of workplace learning*, 13(5), 209-214.
- Billett, S. (2006). Constituting the workplace curriculum. *Journal of curriculum studies*, 38(1), 31-48.
- Billett, S., Harteis, C., & Eteläpelto, A. (Eds.). (2008). *Emerging perspectives of workplace learning*. Rotterdam/Taipei: Sense Publishers.
- Bottrup, P., & Clematide, B. (2005, December). Workplace learning from the perspective of institutionalized learning. In 4th Researching Work and Learning International Conference, University of Technology, Sydney (pp. 12-15).
- Chrusciel, D. (2006). The role of curriculum in organizational significant change planning. *the Learning organization*, 13(3), 215-229.
- Cleveland-Innes, M., & Potvin, B. (2001). *Curriculum in the workplace: Beyond*

- collaborative design to shared praxis. In *Proceedings from the 2nd International Conference on Researching Work and Learning*.
- Dealtry, R. (2009). The design and management of an organisation's lifelong learning curriculum. *Journal of Workplace Learning*, 21(2), 156-165.
- Dehghani, M., Amin-Khandaghi, M., Jafari-Sani, H., Noghani, M. (2011). A conceptual model study in the curriculum: A critique of research done with the model design approach in curriculum, *The Basics of Education of Ferdowsi University of Mashhad*, 1(1), 99-126. (In Persian).
- Doosti-Hajiabadi, H., Fathi-Vajargah, K., Khorasani, A., & Safayi, M. (2017). Conceptualization of the work environment curriculum discourse; emerging or neglected discourse, *Research in Curriculum*, 25(2), 28-34. (In Persian).
- Dougherty, P. J., & Joyce, B. L. (Eds.). (2017). *The Orthopedic Educator: A Pocket Guide*. Springer.
- Eraut, M. (2004). Informal learning in the workplace. *Studies in continuing education*, 26(2), 247-273.
- Evans, K., & Waite, E. (2010). Stimulating the innovation potential of 'routine' workers through workplace learning. *Transfer: European Review of Labour and Research*, 16(2), 243-258.
- Farzadnia, F. (2016). *Designing an Occupational Curriculum Model with a Sufficient Approach in Training and Improving Project Managers (Case Study of Pars Oil and Gas Company)*. Ph.D. thesis, Kharazmi University. (In Persian).
- Fathi-Vajargah, K. (2009). *Principles and concepts of curriculum planning*, Tehran: Bal. (In Persian).
- Fathi-Vajargah, K. (2011). *Research Need Assessment (Research Problem and Prioritization of Research Projects) for Research Directors and Experts*. Tehran: Ayij.
- Fenwick, T. (2008). Workplace learning: Emerging trends and new perspectives. *New directions for adult and continuing education*, 2008(119), 17-26.
- Fenwick, T. (2010). Workplace 'learning' and adult education: Messy objects, blurry maps and making difference. *European Journal for Research on the Education and Learning of Adults*, 1(1-2), 79-95.
- Fontana, R. P., Milligan, C., Littlejohn, A., & Margaryan, A. (2015). Measuring self-regulated learning in the workplace. *International Journal of Training and Development*, 19(1), 32-52.
- Ghahramani, A., Mohammadpour Zarandi, H., & Mostafavai, A. (2015). The Effect of Organizational Learning on the Economic and Social Responsibility of the Municipality of Tehran (Case: Municipality of Districts 1, 6, 8, 19, 22). *Quarterly Journal of Urban Economics and Management*, 3 (12), 77-98.
- Hughes, P. D., & Grant, M. (2007). Learning and Development Outlook 2007: Are We Learning Enough?. Conference Board of Canada.
- Hulsbos, F. A., Evers, A. T., & Kessels, J. W. M. (2016). Learn to lead: Mapping workplace learning of school leaders. *Vocations and learning*, 9(1), 21-42.
- Illeris K. (2003) Workplace learning and learning theory. *Journal of workplace learning*, 15(4), 167-178.
- Isidro-Filho, A., Guimarães, T. D. A., Perin, M. G., & Leung, R. C. (2013). Workplace learning strategies and professional competencies in innovation contexts in Brazilian hospitals. *BAR-Brazilian Administration Review*, 10(2), 121-134.
- Jacobs, R. L., & Park, Y. (2009). A proposed conceptual framework of workplace learning: Implications for theory development and research in human resource development. *Human resource development review*, 8(2), 133-150.
- Sharifi, S. (2010). Outcome Evaluation Approach: Changing the focus of research from the "user in the library life" to the "library in the user's life", *Librarianship and Information*, 13(3), 271-291. (In Persian).