



## Identifying Training-Based Functions of Massive Open Online Courses (MOOCs) in Leading Organizations' Development

Farshideh Fathi<sup>1</sup>, Hossein Zeinalipour<sup>2\*</sup>, Ali Akbar Shikhi Fini<sup>2</sup>, Kourosh Fathi Vajargah<sup>3</sup>, Esmail Jafari<sup>3</sup>, Javad Hatami<sup>4</sup>

1- Ph.D. student of Curriculum Planning, Department of Educational Sciences, Faculty of Humanities Science, University of Hormozgan, Bandar Abbas, Iran

2- Associate Professor, Department of Educational Sciences, Faculty of Humanities Science, University of Hormozgan, Bandar Abbas, Iran

3- Shahid Beheshti University, Tehran, Iran

4- Tarbiat Modarres University, Tehran, Iran

\* Corresponding author's Email: [hzeinalipour@yahoo.com](mailto:hzeinalipour@yahoo.com)

**Abstract:** Various functions of Massive Open Online Courses (MOOCs) usage should be identified so that with awareness of MOOC's advantages, the organizations can provide the required platforms to implement this type of technology given MOOC's importance and necessity in the workplace. Therefore, this study aimed to identify the training-based functions of MOOCs in leading organizations' development. This was a basic study was conducted using a qualitative research synthesis technique. The statistical population includes documents (books, research and review articles, theses and Internet resources). Of the 86 authentic national and international articles and books published within a period from 2014-2021, a total of 63 samples were selected using a criterion sampling method. Theoretical saturation of themes was reached by the 46th sample. In order to collect data, the library research method was used. The collected data were then analyzed using a thematic analysis technique. Finally, to validate the proposed model, a total of 6 experts in different fields were selected using a purposive sampling method, and they approved the final model after modifications. The research findings revealed eight sub-themes include contribution to organizational empowerment, creating non-formal learning environment, contribution to creating constructive and supportive learning, occupational-organizational performance enhancement, provision of equal educational services, adaptability of training to changes, promotion of participatory learning, contribution to evaluation and receiving feedback for main category of organizational development. The results indicated that being aware of the functions of MOOC in organization development helps clients and operating staff formulate new and creative organizational solutions to resolve performance problems and increase adaptation to the structure, culture, business processes and strategies of the organization and their development.

**Keywords:** Development, Leading Organizations, MOOC, Training Functions

## Introduction

Organizational development is one of the dimensions of determination and deployment of the employees' performance improvement. The ultimate goal of the organization development is to give a structure to the organization's environment so that the managers and employees can use their maximum skills and abilities to achieve the organization's goals. In other words, organization development refers to techniques used to improve the performance of tasks and the effectiveness of organizations. This development process includes creating changes in the organization's

environment in order to present, introduce, and internalize new behavioral values, such as freedom of action and trust in the work environment ([Najafbagy, 2008](#)). Many active researchers in the field of organizational change assume, in their investigations, that organizations need to create an environment providing the context necessary for organizational change ([Weber & Weber, 2001](#)). However, we should note that this process must be designed and implemented based on the current needs of organizational units to synchronize the change in the employees' behavior and the change in skills and occupations with today's changing process leading to the transformation of attitudes, beliefs and values ([Javdani, 2015](#)).

As today, human resources of organizations are considered as the only cause of sustainable development and a key factor in maintaining the sustainable competitive advantage of organizations, this type of development becomes possible as an important tool in development by using the new methods of education, model, and related tools. However, this point should also be considered that what needs to be gradually emphasized in organizational development systems is not just educational implementation, but moving towards learning while leading the organization. One of the factors affecting the development of the organization's performance and achieving more effectiveness is to use the technology change strategy as one of the development strategic changes. Lines of evidence have shown that diffusion of technologies in the occupational fields has affected the development of organizational and functional processes ([Bingham & Conner, 2010](#)). Although, today, each employee is only responsible for their professional development and the organization is not obliged to improve the competence of employees, organizations should provide employees with appropriate tools and support in the workplace so that they can consistently develop their competence ([Czarnecka & Daróczy, 2017](#)). One type of suitable learning tools that have emerged through technology is Massive Open Online Courses (MOOCs). MOOCs have received lots of attention from scientists and experts ([Dodson et al., 2015](#); [Egloffstein & Ifenthaler, 2017](#)). Since 2013, more attention has been paid to the MOOCs' role ([Bersin, 2014](#); [Carson, 2014](#); [Kulkarni et al., 2015](#)) and how they can play a role in the corporate world ([Watted & Barak, 2018](#)).

MOOCs are a relatively new method in digital learning in the work environment ([Egloffstein & Ifenthaler, 2017](#)), and their implementation in the work environment is a more complicated issue. They include a wide range of aspects, such as technology, instructional design, organizational development, and business ([Egloffstein, 2018](#)), and have received lots of attention as a strategic decision because they take a lot of resources to be built. This technology has equally attracted the attention of enterprises, managers, instructors, and learners, and has forced them to look at learning,

teaching, and training through a different lens ([Fischer et al., 2014](#)). Accordingly, the organizations use this type of technology to improve and maintain (formal and informal) learning levels along with different media and tools. Today, all leading business organizations are forced to compete with other organizations as gaining a competitive advantage over other competing companies is important and vital for any firm ([Jevana, 2017](#)).

Despite the newness of this approach, solid evidence about it is scarce and it has not been sufficiently understood from the organizational perspective and employers' point of view ([Savino, 2014](#)). Therefore, further research and designs are required to be conducted, especially in work environment situations, regarding this type of strategy. Moreover, one of the challenges of implementing MOOCs in the workplace is organizational issues, i.e., to what extent organizations support informal learning (MOOCs) alongside formal learning, which is still an open question. Therefore, specialists, managers, and human resources staff should be aware of the costs and advantages of using and producing MOOCs so that they can do continuous measurements and change management properly during MOOCs implementation ([Littlejohn et al., 2016](#)). From another angle and given the viewpoints and studies of management science researchers, the advancement of technology has seriously affected management methods and approaches such that every year we witness major changes in the work environment. Accordingly, this study aimed to identify the training-based functions of MOOCs in leading organizations' development in the form of a conceptual model to provide answers to these questions and a guideline for policy makers, planners, and employers so that they can reliably use this tool for their organization development.

### Research literature

[De Waard et al. \(2012\)](#) conducted research titled "Merging MOOC and mobile learning for increased learner interactions". The results of the end-of-course survey revealed the synergy between MOOCs and mobile learning, including collaboration, informal and lifelong learning, and dialogue (cited by Farzan et al. 2019). In the same vein, in research titled "learning through MOOC", Singh (2016) showed that MOOC has a great ability for lifelong learning and teaching.

In research titled "Possibilities for MOOCs in corporate training and development", [Dodson et al. \(2015\)](#) stated that corporate learning seeks to enable the training and development of its employees in order to fill the knowledge gap and increase productivity. Moreover, the corporate can use MOOCs created through higher education and use them creatively for their specific goals and needs. Considering that the training and development needs of enterprises are very broad and can be very specific depending on various factors, this technology provides a potentially low-cost means for

enterprises to train not only their employees, but a global audience regarding the corporate products and services. On the other hand, the enterprises should not only be able to show that MOOCs are cost-effective but also provide them with a learning resource. This is a great opportunity for enterprises to lead this new learning platform and set up it tailored to their needs. There are potential applications for MOOCs in the corporate world because MOOCs can expand corporate training options, introduce new employment techniques, and provide new marketing and branding channels. In a study titled "Theories and applications of MOOCs: The case for hybrid design", [Anders \(2015\)](#) proposed a conceptual model of prominent theories and applications of MOOC based on a meta-analysis and synthesis of the research literature. The results of this study showed that the hybrid design can support the greatest diversity of learners and interaction with communication network and emergent learning contexts.

In research titled "E-learning as a method of employees' development and training", [Czarnecka and Daróczy \(2017\)](#) found that all business leading organizations have to compete with other institutions, and achieving an advantage over other companies is vital for any enterprise. The authors of this article introduced e-learning as a new method for professional development that provides them with many benefits and facilities, and stated that it can be used for individual development and training large groups of employees. They believe that the employees who are provided with this opportunity can perform their duties more faithfully than others besides upgrading their competences and skills. This issue is also reflected in creating a good atmosphere in the work environment and paying fair wages. Moreover, the employees do not think about job changing because the enterprise leads them toward proper development and each employee is only responsible for his professional development. In this regard, the organization should provide them with the proper tools and support in the workplace so that they can pursue the development of their competence. E-learning also helps the teaching process through computers and the Internet. It is a perfect complement to the traditional education process and we should avoid applying it alone in the general education process. It is a perfect complement to the traditional education process and we should avoid applying it alone in the general education process. Technological changes and the increased access to online services create new possibilities. The authors emphasize the significant importance of the freedom of choice and flexibility for business people such that everyone can learn at their own pace in the selected place and time. Therefore, e-learning is the most effective type of education for adults in the educational areas, such as education, professional courses, and part-time learning, which are faced with a lack of time for learning and a lack of free choice of learning location and program. The most

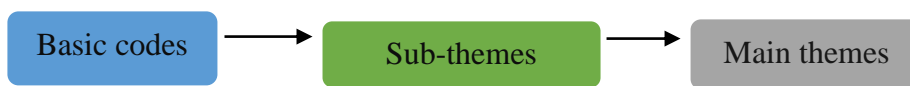
important advantage of this form of education is the personalization of learning and easy, constant, and quick access to educational materials.

In another study, [Park et al. \(2021\)](#) investigated three organizations (i.e., Axis Bank, Microsoft, and Tenaris). The initial evidence showed that the corporate MOOCs can be used as an effective tool for strategic development of human resources. Moreover, all three organizations have shown that corporate MOOCs help increase employee commitment, improve employee performance, establish a positive relationship with customers, and maximize profitability. Additionally, the interactive feature of MOOCs allows participants to share their unique knowledge with others so that they can get access to it. Furthermore, the success of MOOCs in Microsoft Corporation depends on close alignment between its objectives and strategies that are accurately embedded in the context of the corporation. It means that corporate MOOCs help develop new abilities and skills, combine different elements of knowledge, connect previous and new knowledge, and increase the possibility of improving organizational effectiveness. This is the main strategic hypothesis of human resources development ([Garavan et al., 2020](#)). Three instances of studies have shown that MOOCs' advantages are used well, however, this study showed that corporate MOOC opportunities are not only restricted to learning and development. They are also open for other important areas of human resources development, such as organizational development and occupational development. For example, Microsoft has also used MOOCs to facilitate changes in the transformational organization when the manager took the initiatives for their corporate commercial models and strategies. Axis Bank used MOOCs to overcome the challenges of employee retention and talent management. Moreover, Tenaris at last acknowledged that providing formal training programs through MOOCs is insufficient to develop the labor force, and the training model should be rewritten with a new definition to create strong links with human resource processes.

## Material and Methods

This research was conducted using a qualitative research synthesis technique. The study population includes documents (books, research and review articles, dissertations and Internet resources) retrieved by searching Persian and Latin web databases (n=86) (Web of science, ERIC, Science Direct, Sage Journals, ProQuest, Springer, Scopus and Emerald, and Persian databases such as SID, Magiran, Noormags, Civilica, Research Institute of Humanities, Daneshgostar Barakat System, Iran Index, **Iranian Research Institute for Information Science and Technology (IranDoc)** and Free E-book *LibGen* and BookFi databases) using the following keywords: "Corporate MOOC", "MOOC

AND organization", "training with MOOC", " development of organizations with MOOC", "function of MOOC in leading organization ", "benefits of MOOC in the organization", and "virtual training in the organization". Using a criterion sampling method (from the year the corporate MOOC, i.e., 2014 to 2021), 63 sources were selected. Theoretical saturation of themes was reached in the 46<sup>th</sup> sample. The data were gathered using a library research method. The tools used in this method were books, printed texts indexed in databases and the Internet, which were categorized in the form of primary sources (e.g., articles, dissertations and books that are the research report of a researcher), and secondary sources (e.g., sources written using primary sources), and examined. In order to analyze the data, the content analysis method used in qualitative research was utilized. After coding and completing the selected data using the researcher's creativity, the codes were labeled. The sub-themes with the most semantic and conceptual similarity to each other were put together and created new senses and words. In fact, the sub-themes were categorized as the main themes. The process of data analysis is *shown* in Figure 1.



**Fig. 1.** Data analysis process

In order to ensure the reliability of the documents, the peer review method was used. It means that the coding process was reviewed by a subject specialist and a qualitative research expert. Each of these two colleagues randomly selected 3 articles and coded them. As the reliability obtained according to Table (1) was higher than 60%, the reliability of the codes was confirmed. It is worth noting that the coding process performed by the researcher was a long reciprocating process along with much reflection. In this regard, the coding, sub-themes, and main theme were modified and revised several times. Moreover, research participants were selected using a purposeful and criterion-based method to provide the researcher with as much information as possible. These factors also confirmed the accuracy and validity of the obtained data.



**Table 1.** The intercoder reliability calculation (documents/articles)

| Raters                                   | Article number | Total number of codes | Number of agreements | Number of disagreements | Reliability between two encoders |
|--|----------------|-----------------------|----------------------|-------------------------|----------------------------------|
| Subject expert colleague                 | Article 28     | 28                    | 12                   | 4                       | %86                              |
|  | Article 2      | 47                    | 20                   | 7                       | %85                              |
|  | Article 15     | 42                    | 18                   | 6                       | %86                              |
|  | Total          | 117                   | 50                   | 17                      | %85                              |
| expert colleague of Qualitative research | Article 18     | 38                    | 16                   | 6                       | %84                              |
|  | Article 6      | 54                    | 24                   | 6                       | %89                              |
|  | Article 28     | 33                    | 15                   | 3                       | %91                              |
|  | Total          | 125                   | 55                   | 15                      | %88                              |

## Results

The process of analysis and coding of each class is fully shown in Tables (2-9). By reviewing articles, books and research studies in this regard, and considering the basic concepts, and after combining similar factors, the important themes were extracted, and duplicates were removed. After coding was done, the main theme of organizational development with the 8 sub- themes including (contribution to organizational empowerment, creating non-formal learning environment, contribution to creating constructive and supportive learning, occupational-organizational performance enhancement, provision of equal educational services, adaptability of training to changes, promotion of participatory learning, contribution to evaluation and receiving feedback), and 74 codes were obtained. The main theme of organizational development is presented below in Tables (2-9) with the sub-themes and codes of each sub-theme.

**Table 2.** Codes, sub-themes derived from the Organizational development (one part)

| Main-themes                | Sub-themes                                 | Basic codes   | Source  |
|----------------------------|--|---|---|
| Organizational development | contribution to organizational empowerment | helping to development of human resources sustainable                         | Fourrage (2015); Perez-Foguet & et al (2017);               |
|                            |  | useable in elimination of organizational needs                                | McKay & Lenarcic(2018);                                     |
|                            |  | creating a database of teachers   | Ferdig(2018);   |
|                            |  | being efficient in adapting the content to the goals of organization          | Egloffstein & Ifenthaler (2016);                            |
|                            |  | Strengthening organizational capital  | Park, Jeong, & Ju. (2018);                                  |
|                            |  | the use of academic MOOCs in accordance with the company's goals              | Dodson, MA, Berge (2015);                                   |
|                            |  | being efficient in corporate financial return                                 | Weinhard, Sitzmann, (2019);                                 |
|                            |  | being efficient in creating a community of researchers and like-minded people | Moinikia, Ariani, Zahidbablan, Mousavi, and Kazemi, (2015); |

In the face of rapid changes in knowledge and technologies, most of the organizations have today recognized the empowerment programs implementation as one of the useful tools for enhancing organizational effectiveness to be the solution to this problem because organizations are open systems that interact with the environment and need to respond to environmental changes for their survival. In this research, the codes of helping to development of human resources sustainable, useable in elimination of organizational needs, creating a database of teachers, being efficient in adapting the content to the goals of organization, strengthening organizational capital, the use of academic MOOCs in accordance with the company's goals, and being efficient in creating a community of researchers and like-minded people are categorized under the main-theme (Organizational development) of contribution to organizational empowerment according to table (2).

**Table 3.** Codes, sub-themes derived from organizational development (second part)

| Main-themes                | Sub-themes                               | Basic codes                                 | Source                                       |
|----------------------------|--|---|--|
| Organizational development | creating non-formal learning environment | Providing non-formal education methods      | Liu, Zou, Shi Pan, Li (2020); Heller (2014); |
|                            |  | Supporting non-formal of learning           | Tynjälä, Häkkinen, & Hämäläinen, (2014);     |
|                            |  | Providing non-formal learning opportunities | Liu & et al (2020); Zur and Friedl (2021);   |

Today, MOOCs have become one of the most popular informal learning channels for working professionals to update their knowledge and skills in order to resolve new professional challenges (Heller, 2014) and to achieve professional development goals (Chae & Han, 2018). This informal learning has been widely recognized in adult education literature, and they are usually more engaged in informal learning during the week rather than formal education (Bennett, 2012). As shown in table (3), regarding the analysis of themes in this research, the codes of providing non-formal education methods, supporting non-formal learning, providing non-formal learning opportunities are placed under the sub-themes of creating a non-formal learning environment from the main-themes of organizational development.



**Table 4.** Codes, sub-themes derived from organizational development (third part)

| Main-themes                | Sub-themes  | Basic codes   | Source   |
|----------------------------|---|---|--|
| Organizational development | contribution to creating constructive and supportive learning | provision of trustable MOOC educational content                               | Spector (2017);                                |
|                            |   | provision of the content of the continuous educational program                | De Zube (2017);                                |
|                            |   | creating an unlimited reward store  | Chen, Feng, Sun, Wu, Yang, & Chen (2019);      |
|                            |   | helping to establish a healthy educational environment                        | Egloffstein (2018);                            |
|                            |   | helping to improve the performance of the training course                     | Zhu, Sari, Lee (2018);                         |
|                            |   | helping in creating online channels   | Calonge, Aman Shah, Riggs, And Connor, (2019); |
|                            |   | helping to improve the motivation of course learners                          | Zhu, Sari, Lee (2018);                         |
|                            |   | helping in the role of the employer's sponsor by training the employees       | Garrido & et al(2016);                         |
|                            |   | being efficient in controlling the work environment                           | Egloffstein (2018);                            |
|                            |   | being efficient in continuing the professional path                           | Singer (2015);                                 |
|                            |   | creating a balance between career advancement and professional responsibility | Calonge, Santandreu, Shah, (2016);             |
|                            |   | being efficient in establishing job credit                                    | Ng, & McRae (2017); Davidson (2016);           |
|                            |   | being efficient in awarding a valid certificate of individual knowledge       | Alsop (2014);                                  |
|                            |   | employer's support if the content is related to job content                   | Hamori (2017);                                 |
|                            |   | helping to compensate accessibility through peers                             | Doberstein, Hecking, & Hoppe (2017);           |
|                            |   | helping in understanding current workplace performance                        | Dillahunt, Ng, Fiesta, & Wang (2016);          |
|                            |   | creating an approach with low-risk  | Hood, Littlejohn, & Milligan (2015);           |
|                            |   | being efficient in promoting of professional credit                           | Dillahunt, Ng, Fiesta, & Wang (2016);          |
|                            |   | creating a win-win situation  | Ong, & Grigoryan, (2015);                      |

After coding was done according to the Table (4), sub-theme were obtained, including contribution to creating constructive and supportive learning with 19 codes (Provision of trustable MOOC educational content, Provision of the content of the continuous educational program, Creating an unlimited reward store, helping to establish a healthy educational environment, helping to improve the performance of the training course, helping in creating online channels, helping to improve the motivation of course learners, helping in the role of the employer's sponsor by training the employees, being efficient in controlling the workplace, being efficient in continuing the professional path, creating a balance between career advancement and professional responsibility,

being efficient in establishing of job credit, being efficient in awarding a valid certificate of individual knowledge, employer's support if the content is related to job content, helping to compensate accessibility through peers, helping in understanding current workplace performance, creating an approach with low-risk, being efficient in promoting professional credit, creating a win-win situation).

**Table 5.** Codes, sub-themes derived from organizational development (fourth part)

| Main-themes                | Sub-themes  | Basic codes  | Source                          |
|----------------------------|---|--|---------------------------------|
| Organizational development | occupational-organizational performance enhancement | being effective in improving the performance of the organization | Park & et al (2018);            |
|                            |   | helping to improvement job performance                           | Li, & Herd (2017);              |
|                            |   | being effective in improvement people's performance              | Fourrage (2015);                |
|                            |   | Supporting of job performance to different ways                  | Littlejohn & Margaryan, (2014); |

The backbone of every occupation is its employees and the success of the corporate depends on the performance of the employees, e-learning aims to transfer occupational knowledge and skills required to improve organizational performance or help learners achieve personal learning goals (Clarck & Mayer, 2016). In the table (5) after the analysis of the themes, the sub-theme of occupational-organizational performance enhancement with codes (being effective in improving the performance of the organization, helping to improvement job performance, being effective in improvement people's performance, supporting of job performance to different ways) were obtained.

**Table 6.** Codes, sub-themes derived from organizational development (fifth part)

| Main-themes                | Sub-themes                              | Basic codes   | Source   |
|----------------------------|---|---|--|
| Organizational development | provision of equal educational services | collaborating learners with different demographics                              | Watted, & Barak (2018); Meek, Blakemore, & Leah (2017);                |
|                            |   | establishing the cooperation of learners with different educational backgrounds | Watted, & Barak (2018); Meek, Blakemore, & Leah (2017);                |
|                            |   | being effective in accelerating practical learning opportunities                | Tamjidyamcholo, Gholipour, Afshar Kazemi (2020);                       |
|                            |   | useable for learners with different geographical locations                      | Karnouskos (2017); Australian Trade and Investment Commission. (2015); |
|                            |   | useable for learners with different occupations                                 | Karnouskos (2017);   |
|                            |   | useable for learners of different ethnicities                                   | Karnouskos (2017);   |
|                            |   | useable for learners with different cultures                                    | Karnouskos (2017);   |

On the other hand, the diversity in the population of learners in MOOC technology provides the opportunity to cooperate with learners who have different demographic and educational backgrounds ([Walji et al., 2016](#)). According to the coding results table(6), the sub-theme of provision of equal educational services include codes (collaborating learners with different demographics, establishing the cooperation of learners with different educational backgrounds, being effective in accelerating practical learning opportunities, useable for learners with different geographical locations, useable for learners with different occupations, useable for learners of different ethnicities, useable for learners with different cultures).

**Table 7.** Codes, sub-themes derived from organizational development (sixth part)

| Main-themes                | Sub-themes                          | Basic codes   | Source                   |
|----------------------------|-------------------------------------|---|--------------------------|
| Organizational development | adaptability of training to changes | being effective in synchronizing with social changes                | Karnouskos (2017);       |
|                            |                                     | being effective in synchronizing with environmental changes         | McKay & Lenarcic (2018); |
|                            |                                     | establishing of balance between education and work force conditions | Egloffstein (2018);      |
|                            |                                     | being effective in synchronizing with technical changes             | Karnouskos (2017);       |
|                            |                                     | implementing of content according to the needs of the company       | Egloffstein (2018);      |
|                            |                                     | suitable the content to the needs of the company                    | Egloffstein (2018);      |
|                            |                                     | helping in align training with organizational strategy              | Chae & Han (2018);       |

The other significant issue is that e-learning communities are an important inhibitor to transformation of culture to a comprehensive and global culture. In the view of Casio, one of the

experts in the field of education and development, this way, the organization adapts to the many changes in its environment. According to table (7), adaptability of training to changes codes are (being effective in synchronizing with social changes, being effective in synchronizing with environmental changes, establishing of balance between education and work force conditions, being effective in synchronizing with technical changes, implementing of content according to the needs of the company, suitable the content to the needs of the company, helping in align training with organizational strategy).

**Table 8.** Codes, sub-themes derived from organizational development (seventh part)

| Main-themes                | Sub-themes                          | Basic codes   | Source   |
|----------------------------|-------------------------------------|---|--|
| Organizational development | promotion of participatory learning | encouragement to participate in training courses                                      | Castano- Munoz, Kalz, Kreijns, Karel, Punie 2016);                               |
|                            |                                     | providing online cooperative learning conditions                                      | Calonge & Shah (2016);   |
|                            |                                     | being effective in communication network interaction                                  | Karnouskos (2017);   |
|                            |                                     | helping in training self-directed job teams   | Ferriman (2015);   |
|                            |                                     | being effective in sharing knowledge  | Karnouskos (2017);   |
|                            |                                     | being effective in facilitating teamwork  | Farzan, Shams Morkani, Rezaeizadeh & Ghahremani (2019); Thoms & Eryilmaz (2014); |
|                            |                                     | helping to promote the social interaction of learners                                 | Zhu, Sari ,Lee (2018);   |
|                            |                                     | being effective in creating a learning society  | Farzan & et al (2019);   |
|                            |                                     | creating cooperation with different learning groups                                   | Doberstein, Hecking, and Ulrich Hoppe (2017);                                    |
|                            |                                     | helping to the interaction between learners with different situation                  | Barak & Usher (2020);  |
|                            |                                     | getting to know the views of different learners                                       | Kulkarni, Cambre, Kotturi Bernstei & Klemmer (2016);                             |
|                            |                                     | being effective in sharing ideas  | Moinikia, Ariani, Zahidbablan, Mousavi, and Kazemi (2015);                       |
|                            |                                     | being effective in Sharing up-to-date knowledge                                       | Zur and Friedl (2021);   |
|                            |                                     | helping in facilitating the constructive interaction process of teaching and learning | Ghazi Mirsaid, & Emeti (2014);   |
|                            |                                     | Providing global level interaction between workers                                    | Zur and Friedl (2021);   |
|                            |                                     | helping in improvement the social relations of learners                               | Zarghami Hamrah, (2016);   |
|                            |                                     | creating opportunities for learner interaction  | Tamjidyamcholo, Gholipour, Afshar Kazemi (2020);                                 |

As shown in table (8), the largest number and frequency of codes were assigned to this part that falls under the main theme of organizational development with the sub-theme of promotion of participatory learning with the following codes: encouragement to participate in training courses, providing online cooperative learning conditions, being effective in communication network interaction, helping in training self-directed job teams, being effective in sharing knowledge, being effective in facilitating teamwork, helping to promote the social interaction of learners, being effective in creating a learning society, creating cooperation with different learning groups, helping to the interaction between learners with different situation, Getting to know the views of different learners, being effective in sharing ideas, being effective in Sharing up-to-date knowledge, helping in facilitating the constructive interaction process of teaching and learning, providing global level interaction between workers, helping in improvement the social relations of learners, creating opportunities for learner interaction. According to other research studies, most of the course activities are carried out in social learning environments where the participants investigate and analyze both their own data and other participants' interpretation of the data, and learning increases accordingly.

**Table 9.** Codes, sub-themes derived from organizational development (eighth part)

| Main-themes                | Sub-themes  | Basic codes  | Source                         |
|----------------------------|---|--|--------------------------------|
| Organizational development | contribution to evaluation and receiving feedback | Identifying the required skills of employees                           | Fathi Vajargah & Nouri (2015); |
|                            |   | being effective in formative evaluation of materials                   | Evans, Baker & Dee (2016);     |
|                            |   | helping to evaluate in line with the goals                             | Egloffstein (2018);            |
|                            |   | helping to get constructive feedback                                   | Egloffstein (2018);            |
|                            |   | Assist in the implementation of graded assessment                      | Mullen (2017);                 |
|                            |   | Helping to gain experience from evaluation                             | Karnouskos (2017);             |
|                            |   | receiving individual and collective feedback from the training process | Egloffstein (2018);            |
|                            |   | being effective in providing continuous feedback                       | Calonge, & Shah (2016);        |
|                            |   | Providing quick feedback to learners                                   | Calonge, & Shah (2016);        |

MOOCs not only provide an opportunity for easy access to learning resources, but also include several technological features supporting various important activities in the learning experience, such as interaction, collaboration, and evaluation that fall under the main category of organizational development with the codes (Table 9), such as identifying the skills required by employees, being effective in formative evaluation of materials, helping to evaluate in line with the goals, helping to get constructive feedback, assist in the implementation of graded assessment, helping to gain experience from evaluation, receiving individual and collective feedback from the training process, being effective in providing continuous feedback, providing quick feedback to learners.



**Fig. 2.** Conceptual model of training-based functions of MOOCs in leading organizations' development

To validate the proposed model, 6 specialists in the fields of curriculum planning, educational technology and e-learning were purposefully selected as a sample. A researcher-made content validation questionnaire was sent to them. Finally, by analyzing and organizing the extracted components and modifying the model by the opinions of experts, a conceptual model (Figure 2) was presented.



## Discussion

Considering the importance of technological literacy in modern companies and given the study by [Rajamohan and Lucas \(2017\)](#), the courses offered today are often boring and are insufficient for people to follow those teachings due to their unattractive methodology. Therefore, learning and development professionals want a better presence and a novel and interesting method adopted in all pedagogical programs that affects the return on investment through instructional initiatives. In this regard, the learning and development department should take the required measures to perform the qualitative programs. Moreover, a serious look at the way in which courses are provided, learning, and complete development is necessary to speed up the current expectations of the learner. The analysis of the set of tools available to improve the employees' competences shows that MOOC is a phenomenon that has recently begun to penetrate in the organizational environments. Therefore, this study aimed to identify the training-based functions of MOOCs in leading organizations' development. In fact, the leading organizations development is among the plans and arrangements that are considered not only a change, but also is highly likely to increase the readiness to accept changes. Organizational development presents a process of data collection, detection, planning, action, intervention and evaluation in a broad area of work environment through collective collaboration with an educational change factor, such as MOOC, to increase the compatibility between structure, process, strategy, individuals, and organizational culture, organizational capital, rewards, relationships, development of new and creative organizational solutions, and development of the organization's self-renewal capacity. Therefore, the results of this study *open a new avenue toward* the horizon of transparency crystallization in organizations in terms of education. As shown in the tables and given the sub-themes obtained in model (1), namely helping with organizational empowerment, creating an informal learning environment, helping with creating constructive and supportive learning, enhancing occupational-organizational performance, providing equal

educational services, improving collaborative learning, helping with evaluation, getting feedback, and adaptability of education to changes, these advantages of MOOC are completely evident. The previous studies on MOOC have pointed to these advantages here and there, which are in agreement with the results of this study. According to [Dodson et al. \(2015\)](#), a MOOC can coordinate with the organization's business strategies by developing internal training programs. Moreover, it can potentially improve the employee's performance and create a unique learning and development structure in the workplace. Among the advantages of MOOC, [Radford et al. \(2014\)](#) found the expansion of the scope of educational services provision in organizations during their research interviews. In addition, [Za et al. \(2014\)](#) believe that MOOC provides an increase in organizational learning capacity and creates opportunities to solve problems and issues at the individual, group and organizational level. In [Anders \(2015\)](#) view, MOOC provides the greatest diversity of learners in these interactions. The research by [De Waard et al. \(2012\)](#) demonstrated another advantage of MOOC, i.e., the ability for informal learning and lifelong teaching. [Dodson et al. \(2015\)](#) stated that not only this technology trains the organization's employees, but also has the capacity to attract a global audience regarding the corporate services and provides a resource tailored to the organization's needs.

In fact, it can be said that MOOCs *have a broad potential application* in the world of organizations and this is a great opportunity for them to use this new learning platform, which is both proportional to their needs and is considered a valuable tool for their business. Additionally, some measures, such as the familiarization of organizations with MOOCs educational function in developing services provision, in the highly *changing* process of globalization, are a solution to convert potential failures into success and, as a result, improve educational qualities towards sustainable development, incremental changes in business, and a learning organization. Planners, policy makers, and senior managers in organizations can make more detailed plans in this regard by being aware of the

educational functions of MOOC in organization development and factors contributing to higher organizational productivity and find more acceptance to support this type of learning and procedure in organizations (e.g., commercial, public, non-profit, for-profit, volunteer, charity, large, or small organizations) to develop organizational performance and human resources.

**Conflict of interest:** The authors state no conflict of interest in the study.

**Financial sponsor:** The authors acknowledge that they have not received any financial support for all stages of the study, writing and publication of the paper.

**Acknowledgements:** We hereby thank and appreciate all the people who participated in the implementation of this research.

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