

Identifying the Essentials of Corporate MOOCs' Application to the Leading Organizations

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Abstract—The purpose of this study is to identify the essentials of corporate MOOCs' application to leading organizations. This basic research was conducted using a qualitative research synthesis technique. The statistical population includes documents retrieved by searching the Persian and Latin web databases (n=165) using a criterion sampling method (2013–2020). A total of 73 sources were selected. Theoretical saturation of themes was reached by the 48th 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. Based on the research findings, the essentials identified include the main personal, educational, and organizational themes. *Clarification of the logic behind and reason for learning* is among the essentials in designing and formulating any learning from virtual training (e-learning). This is of paramount importance, especially in learning based on corporate MOOCs as an innovation and transformation toward training and improving human resources. This logic prevents the possible resistance of managers and officials and even the organizations and corporations' staff themselves to learning using corporate MOOCs.

Keywords—leading organizations, corporate MOOC, human resources, education

1 Introduction

A leading organization is one that can change its function tailored to the daily needs of the community and individuals and evaluate it. In the body of such organizations, the presence of experts, knowledgeable people, and experienced staff is one of the foundations of the formation of any leading organization that results in a constructive interaction between them, and ultimately will improve the products of these organizations [1]. Today, soon after the beginning of the third millennium AD, we are witnessing rapid and dramatic changes in the field of business. The bankruptcy of

large multinational corporations, integration of the world's economic giants, increasing turmoil in the socio-political arena, etc., all reflect widespread inclusive developments. Therefore, proper strategies must be adopted to pave the way for global competition. As we know, moving toward global markets is not possible using traditional tools and structures [2] and they are only partially applicable to traditional educational programs [3–4]. Moreover, during the adoption of strategies, organizations are required to strive to attract, develop, and retain talents and maintain their human capital as the most important asset in the present era. This requires a context in which people in organizations have a sense of attachment to the employer brand of their respective organization through attractive and memorable experiences and strive toward attaining the specified organizational goals [5].

In Hansen's (1994) view, organizations today work more under global conditions. Therefore, human resource developers face the challenge of exploring the transfer of their experiences. Additionally, technical advances and changes in organizational ultrastructure have made collaborative learning an important aspect of professional development, and human resource development professionals are constantly concerned about the ability of employees to learn together with others inside and outside the organization; this ability is often referred to as the difference between success and failure of experiences [6]. Even consequently, traditional businesses are falling apart, while new opportunities for making income arise. Moreover, knowledge-focused jobs are being influenced by digital developments these days, in part and in whole. Work environments are changing. Various types of jobs are being evolved, and new professions and working practices are being expanded. In this situation, continuous training and professional improvement are more important than ever [7]. To achieve "twenty-first-century competencies", learning to work must be accompanied by a continuous and independent process [8]. Therefore, fundamental changes must be made in organizations. The digital work environment can provide such a platform for creating new experiences in doing business activities. Digital technology transforms workplace learning through innovative teaching methods, easy access to learning resources, and flexible learning environments [9]. In fact, it can be said that the use of digital technology is evident in almost every aspect of daily life from making a change in business to occupation in general. Contemporary learning in the workplace requires a new perspective on the learning environment with a particular focus on non-formal learning environments and learning with technology. Currently, digital education in the workplace is mainly implemented in non-formal learning environments, such as online courses [10]. In this research, attempts were made to address one of the emphasized strategies in digital technology, i.e., the use of corporate Massive Open Online Courses (MOOCs) technology and its application to the business of leading organizations.

As the newest symbol of distance learning, MOOCs are implemented on the Internet [11]. In addition to examining educational activities, MOOCs are provided on different platforms with different strategies [12] and collect and analyze a large amount of information about learners [13]. Moreover, by providing high-quality educational materials with free access, they represent an opportunity to join the global community of learners and professionals in teaching and learning [14]. Corporate MOOCs are applied to both public and private forms in companies [15]. However, regarding the difference between corporate and academic MOOCs, it can be stated that: 1) corporate

MOOCs are mainly limited to staff; 2) they are often only open within the organization; 3) They can include face-to-face elements (discussion) if colleagues get together, and 4) Extremely customized content is provided to them if there is a need to train staff. From a human resources perspective, corporate MOOCs can provide a flexible, scalable, as well as cost-effective tool for education that allows content to be designed specifically to meet organizational needs [16].

Corporate MOOCs enable organizations to include all administrative and legal issues related to the organization in the formal training session [17]. These new facilities have broken many of the restrictions and monopolies and created conditions so that people can learn based on their interests, needs, goals, expectations, and place and time [18]. In other words, professional learning in organizations can be developed and improved using the existing capacities in cyberspace [21,20,19]. In general, contemporary learning in the workplace is re-reading the shape and design of learning environments with a particular focus on learning technology [10].

Although there are various job-related training courses on different MOOC platforms, research on these courses is limited. Current research studies the design of MOOCs, learning experience, and predictors of retention [22].

From an organizational view, employers do not adequately value how MOOCs can improve the development of staff skills [23]. For example, the results from a mixed-methods study of human resource professionals' thinking on MOOCs showed that they have relatively little knowledge about MOOCs, although they identified the expansion of the scope of providing educational services as one of the several advantages of MOOCs in the professional improvement of staff during their research [24]. In this regard, other research studies have noted the lack of sufficient knowledge or awareness of learners and organizational and corporate planners about the role and effectiveness of MOOCs in the workplace [25–27] because there is not enough understanding of their potential as a professional learning environment, and very limited research has been done on what features and characteristics of MOOC training are useful for them [28]. Park, Jung, and Reeves [29] found that although MOOCs provide learners with social media opportunities to talk about work topics, many participants do not use this feature because they are unaware of it. In addition, there is little empirical evidence on the effectiveness and acceptance of corporate MOOCs [30–31]. For example, according to the literature, only the following organizations, which are currently used to train staff, apply MOOCs: Axis Bank organization (that uses MOOCs to increase turnover rates and attract top talents), Microsoft organization (to improve the participants' performance to present sales programs), Tanaris Organization (to boost the internal capacity of the organization for staff training, and to acquire a positive brand and get out of dependence on academic institutions), and large companies, such as SAP [32], McAfee [33], Adidas [34], L'Oréal, Cosmetic [35]. Even in some further studies, employees are skeptical about the value and validity of certificates [36]. Another research study conducted by interviewing human resources managers showed a positive attitude toward the application of MOOCs for professional development [37]. Nevertheless, this phenomenon is still relatively new and the results of the published research on the potential effects of these courses are contradictory [38–39]. In addition to the human resources dimension, the other challenge to the implementation of MOOCs in the workplace is organizational issues, and to what extent the organizations support non-formal learning (MOOCs)

besides formal learning is still an open question. Therefore, awareness of the costs and benefits of using and producing MOOCs should be created among professionals, and management and human resources staff so that consistent measurement and change of management can be well performed when implementing MOOCs in the organization [40]. For this purpose, further research is thus required to be conducted on this type of strategy, especially in workplace situations.

In general, with the rapid and dramatic growth of information technologies, organizations are required to know how to use all these technologies. It should be noted that no study in this regard has been conducted in Iran. In light of the above and considering skills obsolescence on the one hand, and the advent of the advanced technologies in the world, which has led to a change from an industry-based economy to a service-based one, as well as being increasingly affected by the global markets, the current economic crises, corona crisis (reduction of face-to-face training), high training costs, and finally global competition and things like that are not so ineffective in the organizations of this country, on the other hand, attempts were made in this study to take an up-to-date look at the reasons for using MOOCs in leading organizations now that MOOCs are widely used. In this study, researchers are interested in investigating the reasons for the application of corporate MOOCs into leading organizations given the above-mentioned challenges.

2 Materials 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=165) (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”, “improvement of employees with MOOC”, “function of MOOC in companies”, “benefits of MOOC in the organization”, and “virtual training in the organization”. Using a criterion sampling method (from the year the corporate MOOC received attention, i.e., 2013 to 2020), 73 sources were selected. Theoretical saturation of themes was reached in the 48th 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 themes 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 (article))

Colleague	Article Number	Total Number of Codes	Number of Agreements	Number of Disagreements	Reliability Between Two Encoders
Subject expert colleague	Article 31	23	10	3	86%
	Article 22	27	11	5	81%
	Article 15	30	12	6	80%
	Total	80	23	14	82%
An expert colleague of Qualitative research	Article 39	25	11	3	88%
	Article 6	24	10	4	83%
	Article 28	23	13	7	78%
	Total	82	24	14	82%

3 Results

The process of analysis and coding of each class is fully shown in Tables 2–4. By reviewing articles, books, and research studies in this regard, and considering the basic concepts, and combining similar factors, the important themes were extracted, and duplicates were removed. After coding was done, three main themes, including personal, educational, and organizational reasons, with 98 codes were obtained. Each of these reasons is presented below in Tables 2–4 with the sub-themes and codes of each sub-theme.

Table 2. Codes, sub-themes derived from the extraction of personal reasons (main theme)

Main Theme	Sub-Themes	Basic Codes & Sources
Personal Reasons	Helping improve employees' applied knowledge	Acquisition of knowledge towards a new career [21], Creating opportunities to acquire further knowledge [41,21], Enhancing learners' specific knowledge [42], Promotion of general knowledge of the work [41–43], Deepening technology literacy [45], Acquisition of deeper educational experiences [46],
	Improvement of employees' thinking ability	Promotion of learners' critical thinking [46–47], Development of multifaceted thinking [45], Development of entrepreneurial thinking [45], Acquisition of strategic thinking through MOOC training [48], Enhancement of the power of rational analysis [45],
	Helping improve job skills	Access to up-to-date world-class skills [41], The skill of dealing with problematic job situations [41], Acquisition of essential skills in using new technology [6], Filling the academic skill gaps at work [49], Acquisition of new professional skill [21], Development of skills related to the current job [21], Development of skills related to the future job [50], Team empowerment of staff in the profession [51], Paving the way for the employee's job promotion [52],

As shown in Table 2, regarding the main theme of personal reasons, three sub-themes were obtained after analyzing the findings from axial coding: helping improve the employees' applied knowledge with 6 codes (i.e., acquisition of knowledge towards a new career, creating opportunities to acquire further knowledge, enhancing learners' specific knowledge, promotion of general knowledge of the work, deepening technology literacy, and acquisition of deeper educational experiences), improvement of employee's thinking ability with 5 codes (i.e., promotion of learners' critical thinking, development of multifaceted thinking, development of entrepreneurial thinking, enhancing the power of rational analysis, and acquisition of strategic thinking through MOOC training), and helping improve job skills with codes 9 codes (i.e., getting access to world-class skills, dealing with difficult job situations skills, acquisition of essential skills in using new technology, helping improve skills, filling academic skill gaps at work, acquisition of new professional skills, development of skills related to current job, development of skills related to future job, team empowerment of employees in the profession, and paving the way for the employee's job promotion).

Table 3. Codes, sub-themes derived from educational reasons (main theme)

Main Theme	Sub-Themes	Basic Codes & Sources
Educational Reasons	Benefitting from new educational opportunities	Creating new educational opportunities [53], Development of education in various forms [54], Virtualization of educational environments [55], Paving the way for special training [6], Modular training for the independence of learners [56], Elimination of traditional learning limitations [57–58], Ability to simulate of real events [59], Interesting training courses [40], Informal communication with specialists [60].
	Providing unlimited learning to employees	Temporal flexibility [62,32,41], Spatial flexibility [62,63], No admission restrictions on the number of learners [64].
	Facilitation of getting access to resources and learning opportunities	Reliable educational resources [65], Complementing traditional training courses [35], Accessibility of diverse training courses [61], Providing Diverse sources tailored to the needs of employees [66,35,67], Accessibility of resources [9].
	Benefit from an interactive learning network	Creating an interactive network between learners [68], Facilitation of teamwork in learning [69–70], Improvement of social communications skill [71], Creating diverse communication methods [71], Development of the communication network of likeminded business people [51], Helping to share experiences [72,45],
	Improvement of staff teamwork skills	Laying the groundwork for the formation of a professional community [66–73], Empowering team skills of staff [51], Facilitating and strengthening cooperation [74], Strengthening active participation [68], Formation of multinational learning groups [6,72], Development of intercultural perspectives [61], Promotion of empathy among participants [74], Promotion of social adjustment [74],
	Existence of person-centered education	Promotion of life-long learning [53–75], Helping with independent learning [76], Playing a direct role in learning [6,52], Promotion of learning responsibility [77],
	Optimization of the teaching-learning process	Learning at high levels [18], Being active learners [56], Promotion of the active engagement of employees [45], Creation of creative learning [47], Innovative learning programs [61], Provision of diverse evaluation methods [55], Existence of immediate feedback [68], Self-assessment of personal experiences [16], Attitude development [71,65], Creating a non-formal learning platform to meet professional challenges [78],

(Continued)

Table 3. Codes, sub-themes derived from educational reasons (main theme) (Continued)

Main Theme	Sub-Themes	Basic Codes & Sources
	Being cost-effective	Fast return on investment [79], Helping with introducing new products [6], Helping with increasing productivity [54–80], Reduction of education costs [35–81], Contribution to the quality of products [6],
	Utilization of a flexible learning environment	Possibility of customized training courses [36], provision of a range of options for vocational learning [53], Adaptation to the work situation [18], Compatibility with a variety of styles [16], Provision of a range of options s for continuous learning [53],
	Effectiveness of educational system's efficiency	Changing the traditional paradigm of education to the new one [56], Provision of high-quality services [82], Improvement of the educational quality of organizations [42], Promotion of innovation in organizations [83], Unlimited reward tank [84], Quick Updating information [18,58,48], Provision of g a safe learning environment [16], Acquisition of up-to-date ideas [85], Democratizing of education [86], Provision of a variety of ways to support learning activities [77],

According to the coding results (Table 3), most of the codes fall into the main theme of educational reasons with 63 codes in total, including benefiting from new educational opportunities with 8 codes (i.e., Creating new educational opportunities, development of education in various forms, virtualization of educational environments, laying ground for special training, modular education for the independence of learners, elimination of the limitations of traditional learning, interesting training courses, and informal communication with specialists), providing unlimited learning to employees with 3 codes (i.e., time flexibility, spatial flexibility, and no admission restriction on the number of learners), facilitation of getting access to resources and learning opportunities with 5 codes (i.e., reliability of educational resources, complementing traditional training courses, accessibility of diverse training courses, providing diverse resources tailored to staff needs, and accessibility of resources), benefiting from an interactive learning network with 5 codes (i.e., facilitation of teamwork in learning, improvement of social communication skills, creating a variety of communication methods, helping with sharing experiences, and development of communication network of like-minded people), sub-theme of improvement of staff teamwork skills with 8 codes (laying the groundwork for the formation of a professional community, empowering team skills of staff, facilitating and strengthening cooperation strengthening active participation, formation of multinational learning groups, development of intercultural perspectives, promotion of empathy among participants, and promotion of social adjustment), the existence of person-centered education with 4 codes (i.e., promotion of lifelong learning, helping with independent learning, playing a direct role in learning, and promotion of learning responsibility), teaching-learning process optimization with 10 codes (i.e., learning at high levels, being active learners, promotion of the active engagement of employees, creation of creative learning, innovative learning programs, existence of immediate feedback, self-assessment of personal experiences, attitude developing,

provision of diverse evaluation methods, and creating a non-formal learning platform to meet professional challenges), being cost-effective with 5 codes (i.e., fast return of investment, helping with introducing new products, helping with increasing productivity, reduction of education costs, and contribution to the quality of products), utilization of a flexible learning environment with 5 codes (i.e., possibility of customized training courses, provision of a range of options for professional learning, adaptation to work situation, compatibility with a variety of styles, and provision of a range of options for continuous learning), effectiveness of the educational system's efficiency with 10 codes (changing the traditional paradigm of education to a new one, provision of high quality services, improvement of the educational quality of the organization, promotion of innovation in organizations, unlimited reward tank, quick updating of information, provision of a safe learning environment, acquisition of up-to-date ideas, democratization of education, and provision of a variety of ways to support learning activities). These ten sub-themes are grouped under the main theme of educational reasons. As shown in Table 3, most of the codes are related to the sub-theme of the effectiveness and efficiency of the educational system.

Table 4. Codes, sub-themes resulting from the extraction of organizational reasons (main theme)

Main Theme	Sub-Themes	Basic Codes & Sources
Organizational Reasons	Achieving sustainable organizational competition	Increasing competitiveness [80], Gaining continuous knowledge of technology to acquire a competitive advantage [82], Maintaining position in competitive conditions [80], Gaining continuous knowledge of technology to achieve higher status and credibility [82], being coordinated with business strategies [42–54], Ability to enter the global competitive market [6–83], Development of commercial marketing channels [54], Being efficient in business and branding [87], Provision of the company's educational services to a global audience [54],
	Improving the management function of the organization	Development of new methods of employment [54], Formation of a talent identification channel in the organization [42–48], being capable of identifying prospective employees [41], is capable of identifying employees with motivation for teamwork [41], Accepting changes at the management level [48], Dealing with the Corona Crisis [88],

After coding was done according to the Table 4, two sub-themes were obtained, including achieving sustainable organizational competition with 9 codes (increasing competitiveness, gaining continuous knowledge on technology to acquire a competitive advantage, maintaining a competitive position, gaining continuous knowledge on technology to achieve higher status and credibility, being coordinated with global strategies, being capable of entering the global competitive market, development of commercial marketing channels, being effective in business and branding, and providing the company's educational services to a global audience), and improving the

performance of the organization's management with 6 codes (i.e., development of new methods of employment, formation of a talent identification channel in the organization, being capable of identifying prospective employees, being capable of identifying employees with teamwork motivation, accepting changes at the management level, and dealing with the Corona Crisis).

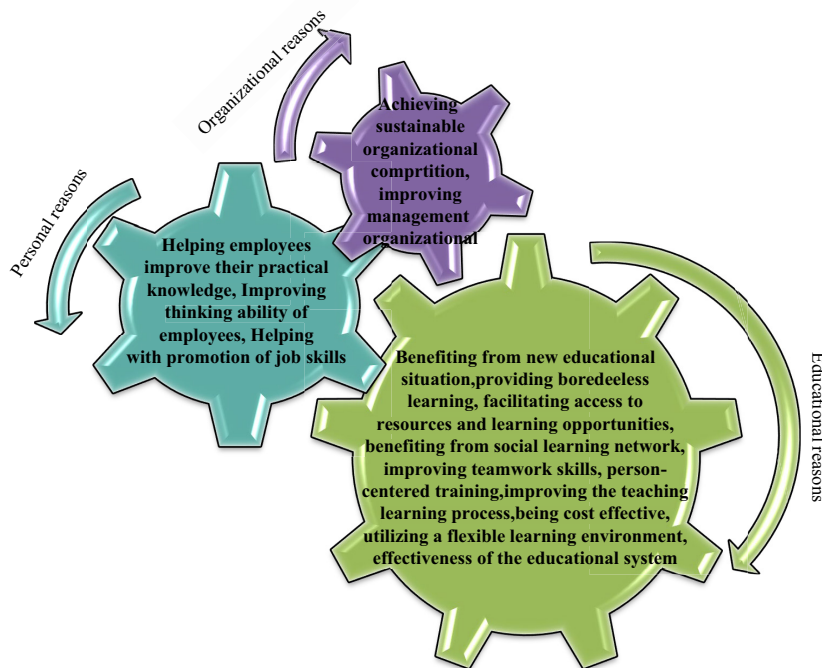


Fig. 2. Conceptual model of the reasons for the use of MOOC in leading organizations

Source: Authors

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 with the opinions of experts, a conceptual model (Figure 2) was presented.

4 Discussion and conclusion

The essentials of corporate MOOCs' application to leading organizations were investigated using a thematic analysis technique. Themes analysis in this research yielded three reasons, including personal (helping with the improvement of applied knowledge, employees' thinking ability, and job skills), organizational (achieving sustainable organizational competition, improving organizational management performance),

and educational (benefiting from the new educational situation, providing borderless learning, facilitating access to resources and learning opportunities, benefiting from the social learning network, improving teamwork skills, individual-centered training, improving teaching-learning process, utilization of flexible learning environment, and effectiveness of educational system) reasons. According to the obtained results, it can be said that the use of MOOCs in professional learning presents a wide range of solutions to support learning and job-related activities. This type of learning, which takes place in the workplace, usually through social and intellectual activities, supports actions related to reflection, interaction, collaboration, knowledge sharing, or networking in the scientific community. On the other hand, considering the extensive educational needs of companies that can be very specific depending on different factors, this type of online education is regarded as a potentially low-cost tool by which the organizations can provide *educational and improvement opportunities* at higher organizational levels with lower costs, and it can be a breakthrough. This is regarded as part of the growth capacity in organizations. In fact, this way, the organizations can potentially improve the staff's performance toward human resources development using training programs in line with global business strategies. Generally, it can be said that meeting the need for modern learning and teaching technologies and the need for quality incentives in delivering products and services, creating new competitive arrangements, creating a flexible and responsive work environment, providing the required resources to equip staff with current and future job skills, and proposing effective solutions to solve various business problems, etc., are among measures to be taken by companies and organizations in strategic situations to improve human resources. Fortunately, all these activities can be taken using this type of technology, i.e., corporate MOOCs. Therefore, the client's and authorities' awareness about the essentials of application of this type of training to organizations helps with achieving higher organizational efficiency and can make more detailed plans in this regard and further accept to support this type of learning and procedure in (commercial, governmental, non-profit, for-profit, volunteer, charitable, large and small) organizations for the development of organizational performance and human resources.

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