

PalArch's Journal of Archaeology  
of Egypt / Egyptology

IDENTIFYING EFFECTIVE FACTORS IN THE IMPLEMENTATION OF E-COACHING IN SMALL AND MEDIUM ORGANIZATIONS IN THE FOOD INDUSTRY

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**Mahan Hassani, Dr. Alireza Motameni. Identifying Effective Factors in The Implementation Of E-Coaching in Small and Medium Organizations in The Food Industry -- Palarch's Journal of Archaeology of Egypt/Egyptology 18(18), 1548-1562. ISSN 1567-214x**

**Keywords: E-Coaching, Coaching, Food Industry, Fuzzy Delphi Method.**

**ABSTRACT**

One of the most important and effective factors in organizations is the amount of knowledge, experience, and professionalism, leading to comparative advantage and business success. Business owners and young executives are constantly facing micro-problems. These micro-problems are, in fact, themselves the result of fundamental challenges. Instead of professionally identifying and overcoming root barriers, they often try to resolve the effects of these root deficiencies. As technology grows, the competition in the industry increases, and the market becomes more specialized. At the same time, entering a competitive market is more difficult than ever. One of the problems for start-ups to enter the market is management problems and consequently human resources problems. These challenges can be minimized by using cyber-space and online coaches. This paper aims to identify the factors affecting the implementation of e-coaching in small and medium organizations in the food industry. This research is considered as development-based and applied research in terms of purpose. The research method is a combination of survey methods and descriptive-analytical methods. The tools used in the research are questionnaires and interviews. The questionnaire used in this study is a fuzzy Delphi questionnaire for pairwise comparisons and ranking of factors. After studying the libraries-based resources and interviewing the experts, we identified 25 factors and provided them in 37 questions. Finally, after performing the fuzzy Delphi method, 16 effective factors were identified for the final ranking. After ranking 16 effective indicators,

suggestions were made, including audio-visual equipment to implement the e-coaching program.

## INTRODUCTION

Organizations operate in a highly complex and changing environment. So, we need a new approach to managing and leading, and meeting the needs of employees and the organization in highly dynamic environments. The coaching prevalence in organizations is due to rapid changes in the organizational environment such as globalization, technological advancement, and changing the nature of tasks. Coaching is essentially an interactive relationship that helps staff identify, guide, and achieve personal and career goals more quickly. Due to the popularity of the coaching method in organizations and to facilitate work and save time, researchers recently introduced the e-coaching system. In this system, speed and accessibility play an important role. The e-coaching systems are usually categorized according to needs and scope. In industry, this method is often used to facilitate information collection, the connection of experts to the industry, and their experiences. Accessibility and low cost compared to face-to-face meetings in the industry are the advantages of this approach.

The main features of using this method are: employing experts as a coach, personalization, and optimization for each user, lower cost than face-to-face coaching, learning from consumer behavior, improving relationships, self-adaptation, easy access for users, protecting the privacy of individuals, and reducing time and space constraints.

Over the past twenty years, coaching has been one of the most effective tools for making changes in organizations and improving managers' performance in human resource management. Organizational change can be achieved by focusing on key people in the organization. Coaching as a powerful yet competent tool can guide people within the organization. Coaching is an interactive and results-oriented process that aims to facilitate the conditions for personal growth, performance improvement, and self-centered learning and ultimately increase employee ability to solve problems and improve self-confidence. The latest statistics published by the Statistics Center of Iran on active industrial manufactories in the country in 2015 show that about 2,540 food industry manufactories (with more than ten employees) are active in the country, and their added value for the Iranian economy is equal to 144 thousand billion rials. This figure is more than 12% of the value-added of the entire industrial sector in Iran. Also, statistics in the field of production capacity in the country's food industry show that investment in Iran's food industry is at least 150 million tons. Unfortunately, due to lack of planning and attention to macro-management issues in the country and the amount of resources waste in this industry, about half of this capacity has remained unused and over the past years has had a negative impact on the productivity of this industry. According to the mentioned topics, this study aims to identify the effective factors in implementing e-coaching in small and medium organizations in the food industry.

## RESEARCH LITERATURE

### *E-Coaching*

The original concept of coaching was first introduced in the late 18th century in psychology by Wundt and James and had a major impact on society. With the advancement of technology and industry, the problems of artisans became more complex, and as before, a manager could not do everything alone because the tasks became specialized. For this reason, business owners felt the need to train staff. After the development of coaching in psychology in the early 19th century, which resulted from Sigmund Freud's efforts, the coaching principles also found their way into the body of industry, and industry owners used coaches to train their employees.

The initial maturity of coaching occurred in the 1920s, just as organizations were shifting their structure from a machine structure to a more flexible and ergonomic structure. They divided the body of their organization and appointed a middle manager for each department. Nevertheless, they faced the problem of a lack of experienced managers. This led economic and industrial educators, usually university professors and industry experts, to enter the job market. In the late 1970s, with the dramatic growth of American industry, the strengthening of expertise in the organizational sectors, and increasing competition, large companies sought greater market share and used every method and tool to thrive. This trend led to the introduction of Kinlaw ideas, the scientist who has had the greatest impact on becoming more specialized in coaching principles. Kinlaw believes that the cycle of experience and knowledge should not be in the hands of a limited number of people; at the same time, competition is the best factor for the development of an industry. So Kinlaw emphasized the presence of senior coaches in the industry so that they could build a larger chain of knowledge and experience. With the advancement of technology and the growth of business on an international scale, the role of senior coaches in organizations increased. For example, if an organization wanted to enter a new market in a new country or even a new continent but did not have enough information about the culture and behavior of its customers, it would quickly hire a senior coach who would master the economic conditions of the country.

The emergence of online coaches in the industry was similar to the presence of coaches in the field of psychology. American veterans returning from the war suffered from many mental disorders. It was difficult for them to get out of the house. At the same time, it was almost impossible to send the doctor to the homes of all the soldiers. That is why, in early 2007, the US government decided to provide video and virtual guidance to its veterans via the Internet. This style of coaching had its advocates and critics. However, in any case, the results of this process made this style of coaching popular and widespread. Ordinary people gradually became more inclined to use it. Subsequently, this coaching style originated in psychology, causing other coaches to use cyberspace to strengthen and guide their clients. This coaching style helped a lot to international businesses because coaches and professionals with less cost

and time can share their experiences with companies and organizations in different countries.

The main idea of e-coaching is easy to access and saving time and money. With the advancement of technology, the maturity of this style of coaching increases. In e-coaching, coaches focus not only on guiding users but also on monitoring the workflow. Users and clients must constantly submit their progress reports, and their progress is monitored online by coaches. E-coaching is not limited to time and place, and people can communicate with professionals on a fully floating basis. This means that people can submit their questions and reports in a relevant and specific virtual platform, and their coach is obliged to answer them at the earliest opportunity. Users always feel the presence of the coach by their side.

### *Types Of E-Coaching*

Types of e-coaching are divided into the following categories:

1. The e-coaching for Business: E-coaching based on business is always done individually or in groups to achieve organizational goals.
2. The e-coaching for CEOs: E-coaching is used to upgrade executives, develop new skills, improve performance, overcome distractions, and prepare for progress. E-coaching meetings at the executive level and in line with the organization's goals improve business results. E-coaching of executives is often done by outsiders in the agreed time or number of meetings.
3. Individual e-coaching: Individual e-coaching helps people to gain awareness, clarity of individual goals and their prioritization, better understanding of their thoughts, feelings, and choices, and appropriate actions to change their lifestyle.
4. Performance e-coaching: Performance e-coaching helps employees at every level to meet job requirements, gain the competencies needed to meet the requirements, identify gaps in current performance compared to optimal performance, and identify opportunities for improvement. Subsequently, coaches help employees, their superiors, and others in the workplace to bridge performance gaps and develop an action plan to advance employees' careers.
5. The e-coaching for new organizational leaders: Coaches help newly hired leaders move in the right direction. This coaching aims to clarify the key components of leadership, identify new responsibilities, achieve goals in the first months, and coordinate the leadership team with the organization. The main focus of this type of coaching is to help new leaders understand business goals and achieve them.

Today, the challenge for small and start-up organizations is gaining a position in competitive markets. They may become so overwhelmed that they forget about their organizational processes, offer poor products and services, and gradually lose the competitive market. E-coaching can transform traditional control methods so that managers and coaches intelligently monitor the control process. In this way, a team of experts has the task of monitoring the various parts of the organization and helps the managers of the organization not to deviate from their main path. The main advantage of this method is the multi-

faceted monitoring of the organization and facilitating conditions for managers.

### ***Main Features Of E-Coaching***

As the name implies, e-coaching should be completely virtual and, as far as possible, face-to-face meetings should not be held. The most important feature is that the coaches have experience and background in the relevant field. In e-coaching, organizations have more options for selecting their coaches. They can even use a team as a coach to minimize individual mistakes. The first and most important characteristic of online coaches is expertise and having work experience that should be considered. The next feature discussed is the high accessibility for the managers of the organization. To this end, the appropriate infrastructure must be in place in cyberspace to launch e-coaching, and this infrastructure must be able to store and archive past information and reports.

On the other hand, managers should share information and reports for their employees to improve the organizational process, strengthen the quality, and improve employee performance (Abdi et al., 2018). The interaction between the coach and the managers should be reciprocal and dynamic. Communication should be in the form of virtual seminars and recorded videos, but the possibility of mutual interaction and meetings should be held virtually. In e-coaching, whenever managers feel that the process is not useful, they immediately change their work process and provide all the reports and results to another coach to not disrupt the organization's work process.

The traditional coaching method is very result-oriented, but e-coaching is process-oriented, and managers can be informed of the work process at any time to have a scale and criteria for evaluating their work. Organizational process integration is one of the reasons organizations use e-coaching. Basically, in e-coaching, it is possible to integrate reporting systems; for example, the company's financial system stores its final report in the virtual infrastructure, and managers no longer have to use multiple systems to view reports, so all departments see the necessary information in a virtual infrastructure.

### ***E-Coaching in Small and Medium Food Industries***

One of the reasons for using e-coaching in the industry is the high bankruptcy of factories in this field, which has grown rapidly in recent years. According to Tejarat News press, only 124 food factories in Iran were closed in 2016, and this number has grown significantly in recent years. The use of traditional methods and lack of access to raw materials has been some of the reasons for the failure of organizations. Lack of staff expertise has been another factor in the failure of organizations. The food industry in the country is growing and has created a lot of investment attractiveness, but it has subsequently attracted non-experts into the field. For example, not paying attention to packaging design has caused a lot of financial losses to organizations, because unlike in previous years, the food market has become highly competitive, and organizations try hard to gain a good position in this market. Many food

business owners do not know the psychology of color and text design to suit their target market and only use their taste to design products.

Nevertheless, they do not know that the customer in this competitive market is always comparing goods. Also, the import of foreign products has made the conditions of competition more difficult for domestic industries because foreign companies conduct field research for all their products (Mousavi et al., 2017). The sanctions challenge has made the market both conducive to domestic producers (reducing foreign competitors) and difficult (to supply raw materials). However, the conditions for investing in the domestic market are generally more favorable than before. It is important to note that only organizations that make the most of new knowledge can succeed with the advancement of technology. Outside of Iran, foreign coaching is very common, and professional coaches have many applicants. For example, in networking, there are many experts in India, and the cost of coaching is very low.

For this reason, many start-ups use expert Indian coaches. In the field of food, most experts are present in Japan and the United States. Especially in the fast-food industry, experienced professionals are mostly American, and many of them work only as coaches (Khodadad et al., 2014).

Before the Corona Pandemic, most coaches were constantly traveling from city to city and even from country to country. They were constantly monitoring the activities of their customers. Nevertheless, the Corona pandemic changed the situation completely, and the coaches had to hold the sessions virtually. As the demand for face-to-face meetings increased, the relevant institutions created a suitable infrastructure for e-coaching. After the increasing demand for face-to-face meetings, the relevant institutions created a suitable infrastructure for e-coaching. The process in the food industry was very simple. For example, if a person intends to set up a production line for fruit canned food but does not have sufficient knowledge and experience in this field, he can use specialized coaches in this field (Amiri and Steiri, 2017).

## **RESEARCH METHODOLOGY**

This research is applied in terms of purpose because it investigates theoretical structures in practical and real contexts and situations and identifies the factors affecting e-coaching in small and medium food industries. The method of this research is a combination of survey methods and descriptive-analytical methods. Also, this research is considered qualitative and field research in terms of nature.

### ***Fuzzy Delphi Method***

The fuzzy theory was first introduced in 1965 by the Iranian scientist Lotfizadeh. He realized the inability of classical mathematics to deal with uncertain real-world problems and created a new framework called a fuzzy theory. One of the applications of fuzzy theory is the implementation of the Delphi method known as fuzzy Delphi. The standard Delphi method is a specific research method run by an observer team and subsequently performed

over time by an anonymous expert group. Its purpose is to reach a consensus on a particular topic. After each round, the results obtained are calculated based on the group's judgment and are used in subsequent rounds, and the results are provided to the group. The basis of the Delphi method is that only experts' opinions in each field of science are effective in predicting the future. The validity of the Delphi method does not depend on the number of participants in the research. The minimum number of participants will be 20 to 25 people. The minimum number of participants in Delphi research depends on the design of the research method. The Delphi method contains a series of questionnaires with controlled feedback, and its purpose is to reach a consensus on a specific topic. The Delphi technique is a powerful process based on the structure of group communication used in incomplete and uncertain issues to achieve group consensus among experts. The main advantage of the fuzzy Delphi method is that it integrates attention to ideas to reach a consensus. The steps of this method are a combination of the traditional Delphi method and data analysis using fuzzy set theory. Fuzzy numbers are also used to fuzzy expert opinions. Fuzzy numbers are fuzzy sets defined based on numerical data in the face of uncertainty about a phenomenon.

### ***Library-Based Studies***

To achieve greater effectiveness in online management, we need to identify the factors influencing this method in small and medium food industries. According to research and studies, these factors are as follows. In the next section, we will examine these factors using the fuzzy Delphi method:

- 1- Network and software infrastructure of the organization
- 2- Training managers
- 3- Training the employees
- 4- Presence of ISO in this field
- 5- Establishing business intelligence in the organization
- 6- Establishment of a control system under government supervision
- 7- Forming a team of coaches consisting of experienced people
- 8- The level of familiarity of experienced people with updated technologies
- 9- Culture building in the organization
- 10- Creating a separate department in the organization for e-coaching
- 11- Creating a web-based system
- 12- The desire of managers to transfer information transparently throughout the organization
- 13- Number of online meetings with coaches
- 14- Allocation of the budget by the government for e-coaching
- 15- Creating a result-oriented payment system
- 16- Ranking of coaches by government institutions
- 17- The amount of physical presence of coaches in the organization
- 18- Using foreign coaches
- 19- The willingness of the people of the organization to cooperate with the business intelligence team
- 20- The desire of managers to participate in face-to-face meetings
- 21- System features such as saving meeting videos, archiving information, etc.

- 22- Transparency in staff reporting
- 23- The level of organizations' access to the Internet
- 24- Creating a special system by government institutions
- 25- Organizational resistance to accepting the e-coaching system

Food industry experts assess the importance of the items mentioned in the fuzzy Delphi questionnaire by following language variables: very low, low, medium, high, very high. Because of the innovation of this process, expert opinions are crucial to identify the factors influencing e-coaching success. For this reason, we used 25 experts in this industry who had successful experiences and activities in this field. The selected individuals have at least five years of effective experience in the food industry and a bachelor's degree. The decision-making team consists of 25 experienced activists and producers in the food industry.

As mentioned earlier, in this section, we convert linguistic variables into fuzzy triangular numbers and then calculate the average of the fuzzy sets. After converting the linguistic variables of each expert to fuzzy numbers, we calculated the difference from the mean. In the second stage, to check the level of intellectual alignment among the experts, we sent the modified questionnaire along with the mean opinions of the experts to the experts again and asked them to review their previous answers and, if possible, change their comments and judgments. In the second phase of the fuzzy Delphi technique, the revised comments were expressed in fuzzy triangular numbers. At this stage, as in the second step, the mean of revised comments was calculated. Furthermore, in the last step, the defuzzification process was performed.

This process will occur until the experts' disagreement between the two stages reaches a very low threshold of (0.2). In this case, the survey process stops completely.

## RESEARCH FINDINGS

### *Identify And Screen E-Coaching Success Metrics*

In this step, we will validate the categories obtained from the qualitative analysis of specialized interviews. A total of 25 parameters were identified as factors influencing the success of e-coaching in the food industry. In total, the experts answered 37 questions in the questionnaire. The Delphi method has been used for screening and identification of final parameters. Delphi analysis is based on the views of 25 experts. Although experts use their mental abilities for comparison, the traditional process of quantifying individuals' perspectives does not fully provide the conditions for the reflection of human thought. In other words, the use of fuzzy sets is better suited to humans' linguistic and ambiguous explanations. Therefore, it is better to use fuzzy sets and numbers for long-term forecasting and real-world decision-making. In this study, we also use fuzzy triangular numbers to transform the views of experts into fuzzy values. Expert views on the importance of each parameter are collected with a 7-degree fuzzy Likert scale.

**Table 1.** The 7-degree fuzzy Likert scale for evaluating e-coaching success metrics

Linguistic variable	Fuzzy value	Triangular fuzzy value
Extremely insignificant	1	(0, 0, 0.1)
From extremely insignificant to insignificant	2	(0, 0.1, 0.3)
Insignificant	3	(0.1, 0.3, 0.5)
Insignificant to moderate importance	4	(0.3, 0.5, 0.75)
moderate importance	5	(0.5, 0.75, 0.9)
Moderate to important	6	(0.75, 0.9, 1)
Important	7	(0.9, 1, 1)

In the following, the fuzzy mean method is used. First, the fuzzy mean of the values related to the questions is calculated, and then the defuzzification process is performed on it. A value greater than 0.7 is acceptable, and any question with a score less than 0.7 will be rejected.

**Table 2.** Results of parameters screening (first round of Delphi technique)

Result of Round (1)	Crisp Value	Fuzzy mean	Questions
Accept	0/890	(0.772,0.918,0.98)	Train managers to use the E-Coaching system
Accept	0/887	(0.768,0.916,0.976)	Creating a culture among managers to use the E-Coaching system
Accept	0/863	(0.728,0.89,0.972)	The organization's network and Internet infrastructure
Accept	0/873	(0.746,0.902,0.972)	Employing experienced people in the food industry
Accept	0/883	(0.758,0.908,0.984)	The level of familiarity of coaches with modern technology
Reject	0/391	(0.238,0.384,0.552)	Establish an accurate mechanism for reporting staff to the coach
Accept	0/847	(0.702,0.874,0.964)	Creating a separate department in the organization for E-Coaching
Accept	0/863	(0.73,0.892,0.968)	Allocation of facilities by the government to organizations
Reject	0/284	(0.14,0.274,0.438)	Training of online reporting system to employees
Reject	0/425	(0.282,0.42,0.574)	Creating a culture of using E-Coaching system
Accept	0/860	(0.726,0.89,0.964)	Create a simple, web-based user interface
Accept	0/853	(0.714,0.882,0.964)	Establish a result-oriented system for paying coaches
Reject	0/519	(0.366,0.518,0.672)	The extent of comprehensive interaction of the organization's employees with the coaches

Reject	0/315	(0.164,0.302,0.48)	Managers' desire to clarify the flow of information in the organization
Accept	0/857	(0.716,0.882,0.972)	The desire of managers to transfer information transparently throughout the organization
Accept	0/853	(0.712,0.88,0.968)	The presence of coaches in the organization
Reject	0/399	(0.258,0.39,0.55)	Existence of a government website for communication between managers
Reject	0/397	(0.248,0.388,0.556)	Online meetings of coaches and managers in the form of conferences
Reject	0/441	(0.298,0.44,0.586)	Follow-up and supervision of E-Coaching coaches
Accept	0/853	(0.714,0.882,0.964)	Ranking of coaches by government agencies
Reject	0/393	(0.234,0.384,0.56)	Mobile application for managers
Reject	0/455	(0.298,0.452,0.616)	Participation of private and outside organizations
Accept	0/897	(0.782,0.924,0.984)	Creating ISO by government agencies
Reject	0/462	(0.282,0.462,0.642)	Existence of a secure virtual platform for storing coaches' reports
Reject	0/340	(0.214,0.328,0.478)	Existence of a virtual platform of reports with different access levels
Reject	0/340	(0.24,0.396,0.578)	Existence of a separate virtual platform for the employees of the organization
Reject	0/356	(0.204,0.346,0.518)	Ability to save online meetings for review by managers and staff
Reject	0/482	(0.32,0.482,0.644)	Create analytical dashboards of work progress
Accept	0/863	(0.73,0.892,0.968)	Establishment of Business Intelligence (BI) department in the organization
Accept	0/867	(0.734,0.894,0.972)	The willingness of the people in the organization to cooperate
Reject	0/449	(0.282,0.448,0.616)	The level of trust of managers in the organization to coaches
Reject	0/405	(0.24,0.4,0.576)	Number of E-coaching coaches
Reject	0/475	(0.324,0.47,0.632)	Replace face-to-face meetings with virtual meetings
Reject	0/458	(0.296,0.452,0.626)	Establishment of a control system by government institutions
Accept	0/887	(0.766,0.914,0.98)	Ability to use foreign coaches
Reject	0/439	(0.282,0.438,0.598)	Possibility of rejecting Iranian managers
Reject	0/542	(0.374,0.542,0.71)	Probability of unwillingness of foreign coaches

Based on the results, the approved questions for the second round analysis are:  
 “Training for managers to use E-Coaching system.”  
 “Creating a culture among managers to use the E-Coaching system.”  
 “Network and Internet infrastructure for virtual communication with coaches”

- “Recruitment of experienced people board in the food industry for the position of E-Coaching.”
- “Coaches’ familiarity with modern technology for online communication”
- “Establish a separate department in the organization for E-Coaching to collect reports and follow them.”
- “Allocate government funding to organizations to build the infrastructure and equipment needed to communicate online with E-Coaching coaches.”
- “Create a simple, web-based user interface between managers and E-Coaching coaches.”
- “Creating a result-oriented system for paying coaches.”
- “The desire of managers to transfer information transparently throughout the organization”
- “The presence of coaches in the organization”
- “Ranking of trainers by government agencies to facilitate selection by managers of the organization”
- “Creating ISO by government agencies to standardize the e-coaching process.”
- “Establish a business intelligence (BI) department in the organization to assist the E-Coaching process and prepare progress-based reports.”
- “The willingness of people in the organization to send data to the Department of Business Intelligence to develop analytical dashboards”
- “Ability to use foreign coaches for E-Coaching.”

Fuzzy Delphi analysis was re-executed for the remaining questions in the second round. At this stage, 16 questions related to the criteria were evaluated based on the views of experts. In the second round, no questions were asked. This is a sign of the termination of Delphi rounds. Although no new questions were added in the second round, we decided to continue the process for another round to make sure. At this stage, 37 questions were evaluated based on the views of experts. The results of fuzzy Delphi in the third round are presented in Table 3:

**Table 3.** Fuzzy mean and screening questions of e-coaching success (round 3)

Result of Round (3)	Crisp Value	Fuzzy mean	Questions
Accept	0.811	(0.656,0.836,0.94)	Training managers to use the E-Coaching system
Accept	0.837	(0.7,0.864,0.948)	Creating a culture among managers to use the E-Coaching system
Accept	0.870	(0.742,0.9,0.968)	The organization's network and Internet infrastructure for virtual communication with coaches
Accept	0.841	(0.702,0.864,0.956)	Recruitment of experienced people in the food industry in the position of E-Coaching coaches
Accept	0.831	(0.686,0.854,0.952)	Coaches’ familiarity with modern technology for online communication
Accept	0.835	(0.688,0.86,0.958)	Establish a separate department in the organization for E-Coaching to collect reports and follow them

Accept	0.829	(0.678,0.854,0.954)	Allocate government funding to organizations to build the infrastructure and equipment needed to communicate in form of online with E-Coaching coaches
Accept	0.833	(0.694,0.854,0.95)	Create a simple, web-based user interface between managers and E-Coaching coaches
Accept	0.833	(0.682,0.862,0.956)	Creating a result-oriented system for paying coaches
Accept	0.865	(0.736,0.89,0.97)	The desire of managers to transfer information transparently throughout the organization
Accept	0.819	(0.66,0.842,0.954)	The presence of coaches in the organization
Accept	0.843	(0.712,0.866,0.95)	Ranking of coaches by government agencies to facilitate selection by managers of the organization
Accept	0.855	(0.722,0.882,0.962)	Creating ISO by government agencies to standardize the e-coaching process
Accept	0.832	(0.684,0.858,0.954)	Establish a business intelligence (BI) department in the organization to assist the E-Coaching process and prepare progress-based reports
Accept	0.801	(0.64,0.826,0.936)	The willingness of people in the organization to send data to the Department of Business Intelligence to develop analytical dashboards
Accept	0.801	(0.636,0.822,0.944)	Ability to use foreign coaches for E-Coaching

In the second and third rounds of Delphi, no questions were eliminated. This is a sign of the Delphi rounds termination. A general approach to ending Delphi is to compare the average scores of two consecutive rounds. If the difference between the two steps is less than the threshold (0.2), the survey process will stop.

### DISCUSSION AND CONCLUSION

This study aims to identify the effective factors in e-coaching in medium and small food industries in Iran. This research is one of the first studies in the country that focuses on this challenge. Even similar foreign studies are very few. This trend shows the innovation and novelty of this study. This paper's scientific and practical results are very useful for company managers to facilitate the selection of appropriate strategies to improve company performance. According to the results of 27 questions, 25 criteria were identified as factors affecting the success of e-coaching in the food industry. The Delphi method has been used to screen and identify the final criteria. Delphi analysis was performed on the views of 25 experts. Although experts use their mental abilities for comparison, the traditional process of quantifying individuals' perspectives does not fully provide the conditions for the

reflection of human thought. In other words, the use of fuzzy sets is better suited to humans' linguistic and ambiguous explanations. Therefore, it is better to use fuzzy sets and numbers for long-term forecasting and real-world decision-making. In this study, we also use fuzzy triangular numbers to transform the views of experts into fuzzy values. Criteria such as "training managers to use the e-coaching system," "organizational culture" and, "networking infrastructure organization" are the most important. Currently, this method is growing abroad and is used in psychology, business, staff training, health, and education. In manager training, the user first registers in trainer organizations to improve his condition and success, then selects an expert coach according to his needs and uses his management page to set and monitor goals for his business. Other criteria mentioned in the questionnaire were used to analyze the second and third rounds. In the second and third rounds, no questions were asked. This is a sign of the termination of Delphi rounds.

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