



Investigating Triple Management Skills (Perceptual, Human and Technical) among Physical Education Managers in Fars Province and its Relationship with Demographic Characteristics of Managers

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Abstract: The aim of this study was to evaluate the relationship between the triple managerial skills (perceptual, human and technical) among physical education managers of Fars province and demographic characteristics (age, work experience, management experience, educational level, athletic experience, field of study, gender). The research method was descriptive and conducted through field study. A researcher-made questionnaire was used to collect data for this study which its validity was calculated (789.0%) by professors of sports management and its reliability was also found 85.0%. The results showed that the technical skill with average score of 39.12 was of the highest importance and perceptual skill with a mean of 23.12 was of the lowest importance from the perspective of subjects. In addition, there is no relationship between some demographic characteristics and skills of managers and there is only significant negative correlation between managerial experience and technical skills of managers. Multivariable regression results suggest that management experience; educational level and work experience have a direct and positive relationship with dependent variable. So it can be concluded these variables had a significant role in the triple management skills.

Keywords: triple skills, perceptual, technical, human, demographic characteristics, managers

Introduction

Management is now one of the relative, important and fundamental advantages of organizations in the competitive and uncertain environment. Since today behind every great economic machine there is a "director", there is no doubt that effective and efficient management ensures the success of the organization in achieving its goals and strategies (Hosseini, 2001). Most of the studies conducted so far within the field of organization and management make it clear that management is the factor that makes integration in organizations. Experienced managers are able to analyze their organizational behavior as well as their employees in the broad context of objectives and formal relations, and take an appropriate professional and organizational behavior by benefiting from integrity, thoughtfulness and flexibility factors and as a consequence, the presence of skilled managers is crucial for the effectiveness of organizations. In terms of management skills, competent managers are also one of the factors for sustaining success in any organization. Effectiveness and efficiency of managers entail management skills that will help them achieve organizational goals using the position and status of the organization (Haghigh et al., 2007). Human being, arrayed with knowledge, is a functional factor for development in the organization; but do not forget that, employment of such privilege in commercial competitions can worth only if economic activities run in a competition. For present close competitive surroundings, priority is with technology oriented thoughts, and in this case,

technology follows the procedure to lead this stability to change & the change to the establishment of an active & inevitably developed organization. In other words, development is the root of the competitive privilege. Development is necessary for change and it shall cause effective change and habit for any organization (Hosseini, 2001). Katz in his theory defines the requirements for successful management as passing management triple skills (perceptual, human, technical). He also asserts that, the drawback of each skill will decrease manager's success chance and diminish organization success possibility as whole; hence, any of skills are required for performing five management tasks (programming, systematization, leading, control & evaluation). In general, in modern organizations hardly a successful manager can be supposed without including vital skills (Dabakndie Ahmadi, 1997). In this regard, regarding the manager's skills in manufacturing and service organizations, Rabines (1998) has demonstrated that the competencies or perceptual skills in managers can be attributed to mental ability of managers in coordinating all activities and interests of the organization, competencies and human skills associated with the ability of managers to work with individuals, understanding and motivating them. However, he believes that the competencies and technical skills are related to the use of tools, methods and techniques necessary to work in a specialized field (Dabakndie Ahmadi, 1997). In addition, Belzer identifies technical or hard skills in managers as "the missing link" critical to the success of the projects .Unfortunately, management science has not yet found its proper place in the management of physical education and sport in our country, and is far from the global development due to lack of competent and qualified personnel. Variety of sports, cultures, tastes and sports facilities caused difficulty and complexity in sport management and have given rise to a new kind of competence and expertise in the field of sport management. Many managers think that they have the fundamental skills and abilities for management, whereas they are unaware of the fact that these skills and abilities aid managers to build their activities and jobs effectively outside the workplace and their presence is indispensable to achieve the success (Goudarzi et al., 2002). Studying and defining the competencies and skills of sports managers and instructional planning for achieving these skills will increase their efficiency and effectiveness of activities in sport organizations.

Problem statement

Successful teamwork requires the proper and efficient management and the role of effective management cannot simply be ignored in the success or failure of groups and organizations. When a group of people are trying to reach a goal, a manager or leader usually takes responsibility for the group; he must have the skills and qualities necessary for leadership in order to direct their members towards the desired target . Sports organizations are expanding and becoming more complex, and therefore, they need skilled managers. DeSensi, Kelley, Blanton, and Beitel (1990, p.33) defined sport management in a broad sense as "any combination of skills related to planning, organizing, directing, controlling, budgeting, leading, and evaluating within the context of an organization or department whose primary product or service is related to sport and/or physical activity". In order to consider the sport agencies as a whole and pay attention to the relationships between their components, managers need perceptual skills. On the other hand, measures such as setting goals and determining strategies, the ability to coordinate factors in the implementation of sports programs, long-term planning skills, skills in delegation and responsibilities, skills in analysis of internal and external relationships and political environment are discussed in the analysis of perceptual skills, (Naderian & Amir Hosseini, 2007). Administrators (managers) utilize human skills to interact with others and coordinate both individual and team efforts in achieving organizational goals. In particular, it pointed out that the manager should be able to work together with domestic and foreign components. Naderian and Amir Hosseini (2001) have shown that sports' managers need skills such as job security for subordinates, conflict resolution skills between employees, speech and rhetoric technique, respectively in order to be more effective and influential in their duties and role as well as affecting the behavior of human resources.

Importance and necessity of research

In all organizations, management is the most important element, which is effective in achieving organizational goals. As the official representative acting for coordinating and enhancing the effectiveness within the organization, manager is responsible for and at the top of the organization and success of the organization in realizing goals depends on exercising and implementing management practices (Pardakhtchi, 1993). Hersey and Blanchard (1996) have argued that successful organizations have characteristics which

distinguish them from the unsuccessful organization and it is nothing but dynamic and effective leadership (Yazdi, 1997). Success in achieving organizational goals will be guaranteed if employees of efficient, competent, skilled, experienced and completely aware managers are existed at the top of organizations (Robbins, 1998). As the largest sports organization in the country, Ministry of Sports is characterized by features that make it distinct from many other areas of management and organizations. These features are mainly related to plans, educational-physical and sports activities, having a wide spread in the community and certain complex components and the scope and complexity of program activities are steadily increasing. As programs and sports activities become increasingly more extensive and complex, sport management become more sophisticated and *complex as well* and new types of qualifications and skills are acquired in the field of sport management . The results of the research showed that managers need all the skills in order to successfully and effectively carry out their duties. In other words, triple skills are indispensable to each other. In general, it can be stated that managers need triple perceptual, human and technical skills (Mozaffari et al., 2002). The aim of this study is to determine the level of triple management skills of physical education managers in Fars province and review what skills they need as well as their relationship with demographic skills of managers and assess its impact on the performance of managers. The results of this research will lead to awareness of physical education managers in general and physical education directors of Fars province in particular regarding their existing situations and their skill levels. They will also encourage sports managers to improve their skills and increase their work quality.

Method

Considering the nature and general objectives of the study (determination of triple management skills among managers of Physical Education Department of Fars province and its relationship with demographic characteristics), the descriptive- correlational research method was utilized. The required information was collected by questionnaire and field study.

Population

The study population included all the managers and their deputies in Youth and Sports Department and Physical education official in Fars province who were serving in operational management level (N= 116).

Sample

Based on the nature of the study, Census method was used (N= 116); 103 questionnaires were analyzed after collection.

Variables

Predictor variables: demographic characteristics of managers which include seven indicators (age, sex, educational level, field of study, work experience, management experience, athletic experience) were considered as independent variables.

Criteria variable: Triple Management Skills (perceptual, human and technical) were considered as criterion variables.

Tools for data collection

This study used a researcher-made questionnaire for gathering data that includes two sections; the first section consists of items on demographic characteristics and seven indicators and the second section comprises of 41 questions regarding triple management skills with 13 indicators in subsets of perceptual, human and technical skills (n=14). Questionnaire was based on a 5-point Likert scale ranging from very low (1), low (2), average (3), high (4), very high (5). To examine the face and content validity of the questionnaire, the researcher consulted with the 6 sports management professors. Validity of the questionnaire was obtained KMO=0.789 and Cronbach's Alpha reliability was obtained $\alpha=0.85$. According to the values obtained, the questionnaire has high reliability and validity.

Results

Table 1: Distribution the frequency of subjects by gender

| Statistical Indicators Educational level | Frequency | Percent | Cumulative percent |
|---|-----------|---------|--------------------|
| Female | 45 | 43.68 | 43.68 |
| Male | 58 | 56.31 | 100 |

Table 2: Distribution the frequency of subjects by management experience

| Statistical Indicators Educational level | Frequency | Percent | Cumulative percent |
|---|-----------|---------|--------------------|
| 1-3 | 39 | 37.86 | 37.86 |
| 4-8 | 27 | 26.21 | 64.07 |
| 9-13 | 13 | 12.62 | 76.69 |
| 13 and higher | 24 | 23.30 | 100 |

Table 3: Comparison of scores of skills needed by managers from the perspective of subjects

| Skills | Number | Mean | Standard deviation |
|------------|--------|-------|--------------------|
| Perceptual | 103 | 23.12 | 3.12 |
| Human | 103 | 29.16 | 5.01 |
| Technical | 103 | 39.12 | 6.89 |

Table 4: Prioritizing each of the subscales of cognitive skills from the perspective of subjects

| | Effective factors | Average ratings | Chi-square | df | sig |
|----|---|-----------------|------------|----|-------|
| 1 | I try to reduce and eliminate disputes among employees | 6.93 | 27.60 | 13 | 0.000 |
| 2 | I cooperate with other organizations and institutions on the basis of rules and regulations to achieve goals. | 6.75 | | | |
| 3 | I check the results of implemented decisions in order to be ensure of their effectiveness | 6.63 | | | |
| 4 | I have expertise in evaluating and forecasting each decisions | 6.58 | | | |
| 5 | I think about possible solutions before any decision | 6.52 | | | |
| 6 | I gather adequate information before making a decision | 6.64 | | | |
| 7 | I'd recognize that solving these problems is a priority | 6.21 | | | |
| 8 | I have skills in identifying problems and the relationship between them and taking timely measures | 6.02 | | | |
| 9 | I provide opportunities for solidarity and teamwork in staff | 5.82 | | | |
| 10 | I am skillful in urgent decision making | 5.61 | | | |
| 11 | I use the views of others in decision-making related to time-critical events and facts surrounding | 5.42 | | | |
| 12 | I am flexible and able to adapt to changing conditions and unexpected situations | 5.13 | | | |

| | | | | | |
|----|--|------|--|--|--|
| 13 | I use and accept comments and provide constructive suggestions | 5.06 | | | |
| 14 | I authorize my staff based on their duty | 5.03 | | | |

Table 5: Ranking each of the technical skills subscales from the perspective of subjects

| | Effective factors | Average ratings | Chi-square | df | sig |
|----|--|-----------------|------------|----|-------|
| 1 | I'm familiar with administrative and financial affairs | 4.93 | 21.25 | 13 | 0.001 |
| 2 | I consider the expertise and capability of employees as I want to set the agenda and entrust duties to them | 4.81 | | | |
| 3 | Anticipating and trying to complete the office personnel | 4.65 | | | |
| 4 | I monitor the activities and the proper execution of approved programs | 4.50 | | | |
| 5 | I would take advantage of all the facilities and space | 4.43 | | | |
| 6 | I try to prepare the equipment, facilities and materials and educational equipment | 4.31 | | | |
| 7 | I recognize the administrative and instructional needs for my staff and introduce them to the office for retraining and training courses | 4.12 | | | |
| 8 | I monitor employee attendance. | 3.76 | | | |
| 9 | I establish Council staff in a timely manner and within the framework of organization | 3.53 | | | |
| 10 | I monitor the implementation of regulations and guidelines designated by the organization or office | 3.47 | | | |
| 11 | I supervise staff's training progress very precisely | 3.32 | | | |
| 12 | I'm familiar with the principles and measuring staff's progress and achievements | 3.26 | | | |
| 13 | I adapt office activities or objectives of the organization | 3.15 | | | |
| 14 | I recognize the relationship between various activities in office and provide coordination among them. | 3.05 | | | |

Table 6: Results of normality tests of variables

| | Management skills | | |
|-----------------------|-------------------|-------|-----------|
| | perceptual | human | technical |
| N | 103 | 103 | 103 |
| Kolmogrov – smirnov Z | 61% | 98% | 1 |
| Sig | 84% | 28% | 18% |

Table 6: Pearson's correlation analysis between individual characteristics and perceptual skill

| Personal characteristics | Correlation coefficient | Significance level |
|--------------------------|-------------------------|--------------------|
| Age | 0.032 | 0.231 |
| Years of service | -0.053 | 0.324 |
| Management experience | 0.022 | 0.176 |
| Educational level | -0.111 | 0.145 |
| Athletic experience | 0.102 | 0.189 |
| Field of Study | -0.068 | 0.212 |
| Gender | -0.101 | 0.165 |

Table 7: Analysis of correlation between personal characteristics and human skill

| Personal characteristics | Correlation coefficient | Significance level |
|--------------------------|-------------------------|--------------------|
| Age | -0.051 | 0.123 |
| Years of service | -0.101 | 0.145 |
| Management experience | -0.044 | 0.98 |
| Educational level | 0.101 | 0.201 |
| Athletic experience | 0.071 | 0.134 |
| Field of Study | 0.021 | 0.291 |
| Gender | -0.105 | 0.354 |

Table 8: Analysis of correlation between personal characteristics and technical skill

| Personal characteristics | Correlation coefficient | Significance level |
|--------------------------|-------------------------|--------------------|
| Age | -0.049 | 0.112 |
| Years of service | -0.035 | 0.238 |
| Management experience | -0.102 | *0.001 |
| Educational level | 0.028 | 0.321 |
| Athletic experience | 0.059 | 0.132 |
| Field of Study | 0.068 | 0.256 |
| Gender | -0.048 | 0.312 |

Table 9: Results of the correlation coefficient between the triple skills together

| Variables | Perceptual skills | Human skills | Technical skills |
|-------------------|-------------------|--------------|------------------|
| Perceptual skills | | 0.623 | 0.523 |
| Human skills | 0.623 | | 0.412 |
| Technical skills | 0.523 | 0.412 | |

Table 10: Multivariate regression for triple skills

| Steps | variable | F Significance | F | standard error | Added R2 | R ² | R |
|--------|-----------------------|----------------|--------|----------------|----------|----------------|-------|
| First | Years of service | 0.000 | 25.211 | 4.35299 | 0.089 | 0.093 | 0.304 |
| Second | Educational level | 0.000 | 18.618 | 4.26743 | 0.124 | 0.131 | 0.353 |
| Third | Management experience | 0.000 | 14.493 | 4.22846 | 0.140 | 0.151 | 0.388 |

Table 11: Variables entered into the triple skills model

| | Variable | B | Beta | T | Significance Level |
|----------------|-----------------------|--------|-------|-------|--------------------|
| X1 | Years of service | 0.362 | 0.215 | 3.420 | 0.001 |
| X2 | Educational level | 0.374 | 0.176 | 2.796 | 0.006 |
| X3 | Management experience | 0.267 | 0.146 | 2.357 | 0.019 |
| Constant value | | 16.528 | | 7.553 | 0.000 |

Discussion and conclusion

The findings showed that gender had no significant relationship with triple Management Skills (perceptual, human and technical). This finding is consistent with the findings of Naderian and Amirhoseini (2007), Shoja (2006), Abdullahi (2005) and Junie (1993). They also came to the conclusion in their investigation that gender has no effect on the success of managers, although Junie suggested that gender is only effective in making business decisions. The results showed that there is no significant relationship between age and Triple Management Skills (perceptual, human and technical). This finding is also consistent with the findings of Naderian and Amirhoseini (2007), Salimie et al. (2006), Shoja (2006), Abdullahi (2005) and Rokhbakhsh (1994). They also reached the conclusion that age demographic characteristics are not significantly related to job management skills, successful performance management and style. The results did not show a significant association of educational level with three managerial skills (perceptual, human and technical). This finding is consistent with the findings of Naderian and Amirhoseini (2007), Abdullah (2005), Salimie et al. (2006), and Rokhbakhsh (1994) regarding the relationship between educational level and technical and human skills; but is inconsistent with the findings of Najafabad (2007) and Rismanchian (1999). This discrepancy may be related to the industry showing that education level has been the most influential factor in determining the required technical director. In his research among the principals, Rismanchian reached the conclusion that there is a significant relationship between managers and their educational level. Naderian and Amirhoseini (2007) and Abdullah (2005), came to the conclusion that education level is significantly related to perceptual skills. Although both studies are related to physical education, their discrepancy in results is attributed to their statistical population from middle sport managers to athletic directors from various sports organizations. Management levels have played a major role in determining the need for triple skills management, thus the relationship between demographic characteristics of these skills are different in the three levels of management. The results showed that educational level has no significant relationship with triple management skills (perceptual, human and technical). This finding is consistent with the findings of

Naderian and Amirhoseini (2007) and Abdullahie (2005) and also Salimi et al. (2006) regarding the relationship between educational level and human and perceptual skills. In their study, Salimi and colleagues came to conclusion that occupational success does not have a significant relationship with managers and their academic field. However, Naderian and Amirhoseini and Abdullahie found in their study that academic field has a significant relationship with the technical skills of sports administrators. They believe that managers studying in physical education are more successful because of their valuable experiences in this field. Lack of relationship between technical skills and academic field is perhaps related to statistical population of study who had working experience in planning and program development and implementation. This finding is consistent with the findings of Naderian and Amirhoseini (2007), Najafabadie (2007), Shoja (2005), Abdullahie (2004), Rismanchian (1999) and Rokhbakhsh (1994), but is inconsistent with the findings of Hosseini Nia (2006). In his research, he comes to the conclusion that work experience is among the factors hindering the effectiveness of executives, managers who are active and involved in the modernization, development and equipment of schools. The results showed that management experience has no significant relationship with Triple Management Skills (perceptual, human and technical). This finding is consistent with the findings of Naderian and Amirhoseini (2007) with respect to technical expertise and management experience as well as is consistent with the finding of Soleimanie study (2006). In their study, Amirhoseini and Naderian came to the conclusion that management experience has meaningful relationship with perceptual management skills among managers, because it has major impact on the decision-making and planning skills. However, a significant correlation was found between management experience and technical skill ($p = 0/001$, $r = -0 / 102$). Since there is a significant negative correlation between managerial experience and technical skill, it can be concluded that an increase in a person's management experience will consequently lead to greater involvement in the processes of planning, organization, control and execution of programs; however, at the operational level, they tend to take their distance from the implementation of technical skills and charge with the responsibility of overseeing the implementation of these skills (technical). The results did not show a significant correlation between athletic experience with triple managerial skills (perceptual, human and technical). This finding is consistent with the findings of Naderian and Amirhoseini (2007) and Abdullahie (2005) in connection with the exercise of human and conceptual skills. However, the researchers came to the conclusion that there is a significant correlation between athletic experience and sports managers with technical skills. Their findings showed that there was a significant relationship between the triple managerial skills (perceptual, human, and technical). This finding is consistent with findings of Abdollahi (2005), Farvardine (2005) and Mozaffarie (2002). They also showed that there were significant correlations between the triple managerial skills (perceptual, human, technical), showing that managers need all these skills in order to successfully and effectively carry out their duties. The results of the research showed that managers need all the skills in order to successfully and effectively carry out their duties. In other words, triple skills are indispensable to each other. As it was observed, comparing the level of skills needed by sports administrators and officials in the Department of Physical Education indicated that their need for technical and human skills is far more than perceptual skill. Given that athletic directors are assessed to be at the operational level, so these findings are consistent with findings of Goudarzi (2003), Mozaffari (2002), Naderian (2002), Ahmadi (1997), Zalli (1997) and Yazdi (1997). It was clearly evident in their findings that what levels of the skills needed more by all managers perform their functions, and described that the need for managers to triple skills is different according to their management levels. In his research, Goudarzi (2003) has shown that there is significant difference between required technical skills of managers in three levels of physical education and operations managers need to have much more technical skills than other skills. In addition, Mozaffarie (2002) in a study showed that there are significant differences between the technical skills needed by managers at three levels and operational managers need technical skills more than other levels of management (top and middle). Since the technical skill deals with things related with facilities, locations, equipment and executive plans and sports operations and these duties and tasks are mainly carried out by operational managers and operational staff in collaboration with technical specialists, operations managers therefore require more technical skills. In addition, many researchers believe that the Operations Managers are still considered to be as employee, who their merit was only because of their occupational superiority sense compared with their colleagues. Naderian (1381) has shown in his research that operational managers need more technical skill in order to perform their tasks effectively. Ahmadi (1997) and Zalli (1997) showed in their study that in order to advance and achieve their organizational goals, managers require skills at organizational and local levels; these skills are different from

each other. Yazdi (1997) showed in his study that operational managers are most in need of technical skills for effectiveness in the conduct of affairs. The findings of this study showed that the triple management skills (perceptual, human, technical) are predicted by demographic characteristics. The results suggest that the included variable (management experience) had a direct and positive correlation with the dependent variable in the first step; the second variable (education) had a direct and positive correlation with the dependent variable management experience in the second step and (management experience) had a positive and direct correlation with the dependent variable and all other variables in the model did not correlate with triple skills. This finding is consistent with the findings of Naderian and Amirhosseini (2007) and Abdullah (2005) regarding the connection of athletic experience with human and perceptual skills, but these researchers came to the conclusion that the athletic experience has a significant relationship with the technical skills of sports administrators.

References

- Dabakndie Ahmadi, A. (1997). " To Investigate and Determine Managerial Skills in Executives of Jihadsazandehie Department in East Azerbaijan Province", Dissertation Master of Business Administration, School of Management, Tehran University.
- Iran Nejad, M. and S. Gohar, Parviz. (1992). "Organization and Management, From Theory to Practice", Tehran: Iran's Central Bank Publication.
- Parhizkar, Kamal (1994). "Management Theory", 5 Publication, Tehran, Agah Press.
- Hosseini, Azamossadat (September, 2001). "Factors in Strengthening the Work Ethic", Journal of Tadbir, No. 115.
- Haghighi, Mohammad Rahimi Nick, Azam & Borhani, B. and Mamiezadeh, Jaafar & Ali Pur MH (2007). "Management of Organizational Behavior", Tehran: Termeh Publication.
- Hosseininia, M. (2006), "Evaluation of Managers of Modernization, Development and Equipping of Schools by Triple Management skills (Technical, Human, and Perceptual) from the Perspective of Staff and its Impact on the Effectiveness, " Master's Thesis, Faculty of Education and Psychology, Shahid Beheshti University, Tehran.
- Rismanchian, M. (1999). "The Relationship between Qualification and Performance of School Administrators and their Service Experiences", Journal of Education, Ministry of Education, Issue 1.
- Shoja, Zahraalsadat (2006). "Training Needs Assessment in Middle Managers in the Field of Commercial Bank in terms of Triple Management skills (Technical, Human, and Perceptual) to Develop their Educational Programs", a Master's Dissertation, Faculty of Education and Psychology, Shahid Beheshti University, Tehran.
- Abdollahi, M. (2005). "The Educational Needs of Middle Managers in Physical Education Department of Education to Triple Skills Management", Master's thesis, Faculty of Physical Education and Sport Sciences, University of Isfahan.
- Farvardine, MM (2005). "Identifying Training Needs among Football Coaches to Occupational Skills Working in the Premier League ", Master's thesis, Faculty of Physical Education and Sport Sciences, University of Isfahan. "
- Feizi, T. (2008), "Principles of Organization and Management", Tehran: PNU.
- Gharayi Moghaddam, Amanullah (2007). "Communication Skills and Organizational Behavior", Journal of Scientific Endeavor, No. 11.

Goudarzi, Mahmoud (2003). "Designing and Explaining Triple Management Skills at Different Levels of Managers of Physical Education Organization", PhD Thesis in Physical Education Planning and Management, Faculty of Physical Education and Sport Sciences, Tarbiat Moallem, University of Tehran.

Goudarzi, Mahmoud and Kozeq Qian, H. and E., M. (2002). "Designing and Modeling of Triple Managerial Skills in Physical Education Organization" of Islamic Republic of Iran, Journal of Harkat (21).

Marashi, Ali Akbar (1999). "Principal in 1400", Journal of Management Education, Volume VI, No. 21.

Mozaffari, Seyed Ahmad and Moshref Javadi, B and Naderian, M. (2002). "Determining Skills and Competencies of PEO from their Perspective and Providing a Management Model in this Regard", Journal Movement Sciences, Volume I, Issue 1.

Milaie, M. (2004). "Organization and Management in Physical Education", Tehran: Akhtar Publication.

Naderian Jahromy, M. and AJ, Seyed E. (2006). "Human Skills for Athletic Directors", Journal of Movement and Exercise, Number

Najaf Abadi, Mahdiah (2007). "Needs Assessment for Middle Managers in Esfahan Steel Company", Atashkar Journal, No. 258.

Yazdi, Saif Ullah (1997). "Evaluating the Management Skills Needed by Managers in the Electricity Industry in Mazandaran", Dissertation Master of Business Administration, Faculty of Economics and Administrative Sciences, University of Isfahan.