Organizational Learning Capabilities: Evidence from the Iranian Agricultural Higher Education System

Enayat Abbasi[1]*, Morteza Akbari[2], Kayhan Tajeddini[3]

1. Department of Agricultural Extension and Education, Tarbiat Modares University, Iran
2. Faculty of Entrepreneurship, University of Tehran, Iran
3. Department of Business Administration, Lund University, Sweden

Abstract

The aim of this research is to understand and assess the application of organizational learning capabilities in the status quo and review desirable situations in the context of the agricultural faculty environment. Data were collected from 329 faculty members in 19 public agricultural faculties using a survey questionnaire. Results indicate that organizational learning capabilities are below average in the status quo of agricultural faculties. When different capabilities are compared, it seems that sharing knowledge, a flexible structure and system thinking provide more organizational learning opportunities for Iranian agricultural faculties. Finally, the implications of the results and further research are discussed.

Keywords

---

* Corresponding Author   Email:enayatabbasi@gmail.com

Introduction

The study of learning organizations has gained increasing importance in recent years. Past research shows that having a learning orientation enables firms to maintain a long-term competitive advantage over rivals and that continuous learning is essential for surviving in dynamic and competitive environments (Dickson, 1996). Scholars in a range of disciplines have studied the nature, drivers and consequences of learning organizations. For example, this construct has been observed taking a sociological approach (Levitt and March, 1988), psychological approach (Daft and Weick, 1984), strategic perspective (the recognition of opportunities for, or threats to, the company) (Kandemir and Hult, 2004; Henri, 2006), as well as from a theoretical organizational perspective (Senge, 1990; Huber, 1991). According to Huber (1991), learning only occurs if a firm recognizes the need to change and acquire new knowledge and understanding.

Like many other higher educational systems in developing countries, the agricultural higher education system in Iran, as well as its faculty members have faced numerous challenges in recent years. On the one hand, the increasing number of students who pursue majors and careers in agriculture and on the other hand, the increasing unemployment rate among agricultural graduated students, have caused an ongoing debate about whether agricultural higher educational institutions have been aligned with the needs of the market, or whether they have to significantly re-examine the issues at hand. For example, Ahmadian (2004) found that the number of students who have studied different disciplines within the broader field of agriculture in Iran has increased from 11404 in 1976 to 60982 in 1996 and 109718 in 2002. Contrastingly, the unemployment rate among these graduate students has risen from 9.1% in 1996 to 24.1% in 2002. This rate was 4% and 13.47% for the total higher education students graduating in 1996 and 2002, respectively (Ahmadian, 2004). Since learning is regarded as a keystone of adaptation (Tajeddini, 2009a), this study argues that organizational learning capabilities can play a pivotal role in improving the current situation and recommend that policy makers pay more attention to exploiting organizational learning opportunities.

Learning literature shows that although there is a wide range of studies concerning the issues of organizational learning and learning organizations within different Iranian industries (see Tajeddini, 2009a), little is known about the organizational learning capabilities in the agricultural sector (Abbasi, 2010; Abbasi *et al*., 2012; Hejazi and Veisi, 2007). Specifically, Hejazi and Veisi (2007) investigated Senge's (1990) five disciplines – shared vision, personal mastery, mental models, team learning and system thinking – at the University of Tehran College of Agriculture and Natural Resources. Additionally, Abbasi and Hejazi (2010) considered transformational leadership and organizational culture as two constructs that provide learning capabilities in all Iranian public agricultural faculties. In sum, previous research results indicate that Iranian universities in general (Salimimoghadam, 2010) and agricultural faculties in particular (Abbasi *et al*., 2010) cannot be recognized as learning organizations. Therefore, these faculties should identify their organizational learning capabilities and view them as opportunities for developing into learning organizations. Thus, it appears that Iranian agricultural faculties have to move from their current state into a more desired future state that embodies the characteristics of "learning". This requires a strong foundation built upon the seven strategic components noted above. Planning and successfully implementing the changes needed to improve learning capability is a crucial part of the process of becoming a learning organization. While previous studies have shown the positive influence of learning orientation on industrial manufacturing firms (Tajeddini, 2009b), knowledge is limited regarding the effect of this construct within educational institutions. The current study therefore seeks to answer four research questions:

1. To what extent, as perceived by agricultural faculty members, have the identified components (i.e., shared vision, system thinking, learning organizational culture, flexible structure, personal mastery, transformational leadership and sharing knowledge) been practiced in the status quo of the agricultural faculties?
2. To what extent, as perceived by agricultural faculty members, have the identified components been situated in a desirable situation within agricultural faculties?

3. Are there any significant differences between the status quo and the desirable situation that includes the seven components in agricultural faculties?

4. Based on the difference between the status quo and the desirable situation, which of the components provides more opportunity for agricultural faculties to learn?

Although learning capability plays a very important role in different industries, we have little knowledge about how it functions within a higher education system (Abbasi, 2010). To fill this gap, we focus on the Iranian agricultural higher education system. In doing so, we investigate the perception of agricultural faculty members regarding organizational learning capability. The results will help us to understand the difference between the status quo and the desirable situation, and lead us toward improving organizational performance within the context of the present study.

Background

Organizational theorists have proposed a variety of organizational learning type definitions (e.g., single-loop vs. double-loop; lower-level vs. higher level; incremental vs. radical; adaptive vs. generative) (e.g., Senge, 1990; Huber, 1991; Argyris and Schon, 1978; Spicer and Sadler-Smith, 2006) and schools (economics, development, managerial and process – see Bell *et al.*, 2002; Tajeddini, 2009a, b).

A review of the literature reveals diverse definitions of organizational learning. Organizational learning is defined as the ability to detect and correct error (Argyris and Schön, 1978); the way firms build, supplement, and organize knowledge and routines around their activities and within their culture adapt and develop organizational efficiency by improving the use of the broad skill of their workforces (Dodgson, 1993); the continual expansion of the organization's capacity to create its future (Senge, 1990); the skill of creating, acquiring and transferring knowledge (Garvin, 1993); the process by which the organizational knowledge base is developed and shaped" (Shrivastava, 1981); the development or acquisition of new knowledge or skills in response to internal or external stimuli that leads to a more or less permanent change in collective behaviour and

that enhances organizational efficiency and/or effectiveness (Spicer and Sadler-Smith, 2006), and the acquisition of knowledge by any of its units that is recognized as potentially useful (Huber, 1991).

In addition, there are a number of debates concerning the terms of learning organizations and organizational learning. Spicer (2004) differentiates between "organizational learning" and "learning organizations", classifying work focused on organizational learning has being descriptive, analytical and academic in approach, whilst work that consistently subscribes to the learning organization is noted as normative, action orientated and practice driven. Spicer states that "organizational learning is "how" organizations learn; the mechanisms and the processes that allow for and add to learning across organizations, while work that concentrates on the learning organization tends to be concerned with the attributes of an organization that allow it to learn effectively" (Spicer, 2004). Spicer's definition is consistent with Cyert and March (1963), who view organizational learning as a process by which organizations as collectives learn through interaction with their environments.

To become a learning organization, organizations should have organizational learning capability. Organizational learning capability is defined as "the ability of the organization to implement the appropriate management practices, structures, and procedures that facilitate and encourage learning" (Bhatnagar, 2006). In different studies, researchers have identified different dimensions as the indicators that provide opportunity for organizations to learn. Goh and Richards (1997) define the indicators of organizational learning capability as experiment, knowledge transfer, teamwork, leadership and mission clarity. Hult and Ferrel (1997) focused on Senge's five disciplines, their dimensions being orientation, system orientation, learning orientation and memory orientation. More recent studies have included Gomez *et al.* (2005), Alger and Chiva (2007) and Chiva *et al.* (2007). In their study, Gomez *et al.* (2005) identifies different dimensions within organizational learning capability as learning commitment, system thinking, knowledge transfer and integration and openness and experimentation. Alegre and Chiva (2007) and Chiva *et al.* (2007) consider organizational learning capability as tangible and intangible resources or skills that the organization uses to achieve new

forms of competitive advantage. These skills enable and facilitate the process of organizational learning. These facilitators, which have been outlined by both organizational learning and learning organization literature, are experimentation, risk taking, interaction with the external environment, dialogue and participative decision-making.

Previous studies (e.g., Huber, 1991) have shown that the following dimensions of learning influence organizations: shared vision, system thinking, learning organizational culture, flexible structure, personal mastery, transformational leadership and sharing knowledge. We posit these seven components as organizational learning capabilities and essential foundations for achieving learning capability in an organization.

Shared vision: the organization as a whole and each unit within it needs to have a clearly articulated vision. Senge (1990) states that building a shared vision, especially a vision of a future desired state, creates tension that leads to learning. Shared vision is a factor that causes the abilities and useful energies of members in an organization to be directed in a shared path. As a result, the sense of mentality, i.e., thinking about "their organization" will change to "our organization". Furthermore, this serves as a collective consciousness of what is common and what is complimentary.

System thinking: the ability to see the big picture and to distinguish patterns instead of conceptualizing change as isolated events (Senge, 1990). As Senge states, system thinking is necessary to build organizations that can truly learn and continually enhance their capacity to realize their highest aspirations. System thinking entails bringing the organization's members together around a common identity. In this way, organizational learning goes beyond the employees' individual learning and takes on a collective nature.

Learning organizational culture: Organizational culture is a set of key values, beliefs, understanding and norms shared by the organization. Consequently, learning organizational culture is a system of values and ways of thinking and common thought that shapes behavioural norms through interaction with people, structure and organizational systems (Naderi Khorshidi, 2002). Goh (1998) believes that learning organizational culture is a type of culture that encourages experience-gaining throughout all levels of the

organization. Such a culture supports learning and enables employees to express their views without fear of punishment.

Flexible structure: a framework that investigates how an organization has been designed, how decisions are made and the communication processes that have been established for accountability to internal and external challenges. The need for an increase in flexibility is one of the major challenges for all institutes of higher education and in general and higher agricultural education in particular (Meel, 1997). Ortenblad (2004) proposes an integrated model of a learning organization that includes organizational learning, learning on-the-job, a climate of learning and an organizational structure that is flexible and organic. In terms of flexible structure, a learning organization is known for removing hierarchical barriers and promoting collective structures such as self-managed and cross-functional teams.

Personal mastery: personal mastery, as defined by Senge (1990), is the discipline of personal growth and learning. It is the process of continually clarifying and deepening personal vision, of focusing energies, of developing patience and of seeing reality objectively. People with high levels of personal mastery are skilled at creating a personal vision and accurately assessing their current reality with respect to said vision. In doing so, they create the potential for considerable organizational capacity building.

Transformational leadership: Leadership is the most heavily supported dimension in the literature addressing organizational learning and learning organization. Transformational leadership is a process of consciously influencing individuals or groups toward adopting changes in current institutional situations and organizational functions. Transformational leaders affect the entire organization through their speech and actions, are aware of its members, goals and missions, and encourage members to think beyond personal benefits. James (2003) believes that leadership in learning organizations is more evolutionary and visionary rather than comparative. Bass (1997) considers four basic dimensions for transformational leadership including idealized influence, inspirational motivation, intellectual stimulation and individual consideration.

Sharing knowledge: Information related to organizational

problems and opportunities should be transferred across functional and structural boundaries within the organization. An organization's ability to effectively leverage its knowledge is highly dependent on its employees, who actually create, share and use the knowledge. Leveraging knowledge is only possible when people can share the knowledge they have and build on the knowledge of others (Ipe, 2003). It is essentially the act of making knowledge available to others within the organization. Knowledge sharing is important, because it provides a link between the individual and the organization by moving knowledge that resides with individuals to the organizational level. Knowledge sharing is defined as an activity of transferring or disseminating knowledge from one person or group to another (Lee, 2001). Garvin (1993) describes the learning organization as an organization skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights. Sharing knowledge implies the internal spreading of knowledge acquired at an individual level, mainly through conversation and interaction among individuals, that is, through fluid communication, dialogue and debate. These seven components, as the indicators that can provide the means for becoming a learning organization, are investigated in this paper within Iranian agricultural faculties.

Methods

The population reviewed in the study included all faculty members of the Iranian public agricultural faculties (N=1726) that were affiliated with the Ministry of Science, Research and Technology (MSRT). Using Krejcie and Morgan's (1970) formula, a sample of 329 faculty members was selected using a stratified random sampling method with proportional allocation. A stratification system developed by the MSRT was utilized for sampling. Based on the stratification, all provinces (and related universities) were classified into five categories, based on their geographical situation. From each category, the needed sample was selected proportional to size and a random sampling method (Table 1).

Table 1. Selected colleges and the number of academic staff and samples

Category	Provinces in each category	Colleges	Number of academic staff	Number of sample
1	Tehran, Zanjan, Semnan, Qazvin, Qom, Golestan, Gilan, Mazandaran, Markazi	University Colleges of Agriculture and Natural Resources, University of Tehran	147	45
		College of Aburaihan, University of Tehran	47	12
		College of Agriculture, University of TarbiatModares	58	16
		College of Agriculture, University of Shahid	23	8
		College of Agriculture, University of Zanjan	54	18
		College of Agriculture, University of Shahrood	21	10
		College of Agriculture, Gorgan University of Agriculture Sciences and Natural Resources	77	26
2	North Khorasan, Razavi Khorasan, South Khorasan, Kerman, Sistan and Baluchistan	College of Agriculture, University of Ferdowsi	102	39
		College of Agriculture, University of Vali-e Asr, Rafsanjan	52	14
		College of Agriculture, University of Zabol	50	11
3	East Azerbaijan, West Azerbaijan, Ardabil, Kurdistan, Kermanshah, Hamadan	College of Agriculture, University of Maragheh	28	7
		College of Agriculture, University of MohagheghArdabili	33	15
		College of Agriculture, University of Kurdistan	31	6
		College of Agriculture, University of Bu-Ali Sina	73	26
4	Isfahan, Yazd, ChaharMahal and Bakhtiari, Lorestan, Ilam, Khuzestan	College of Agriculture, University of Lorestan	38	11
		College of Agriculture, University of Ilam	37	13
		Ramin Agriculture and Natural Resources University	57	19
5	Fars, Bushehr, Kohgiluyeh and Buyer-Ahmad, Hormozgan	College of Agriculture, University of Shiraz	92	31
		College of Agriculture, University of Persian Gulf	8	2
	Total		1028	329

Based on the existing literature, a survey questionnaire was designed to assess seven dimensions of organizational learning. The

questionnaire included: shared vision (7 items); system thinking (7 items); learning organizational culture (10 items); flexible structure (8 items); personal mastery (8 items); transformational leadership (8 items); sharing knowledge (14 items). All measures deployed in this study used a five-point Likert-type scale ranging from (very low) = 1 to (very high) = 5. Each statement prompted replies regarding two dimensions: "how it is", that is: what, in the opinion of the respondent, is the current state of the agricultural college with regards to that particular element; and "how it should be", that is: what, in the opinion of the respondent, is the aspired future state of the agricultural faculties for that particular element? To establish the face and content validity of the questionnaire, 25 learning organization experts were interviewed (e.g., heads of agricultural scientific associations in different agricultural fields). Cronbach's alpha was calculated to assess the internal reliability of different dimensions in two situations (how it is and how it should be), ranging from 0.79 to 0.95 and with an overall internal consistency value for 62 items being equal to 0.97 and 0.98 for status quo and desirable situations, respectively (Table 2).

Table 2. Cronbach's alpha coefficient for different parts of the questionnaire.

Component	Number of items	Situation	Alpha coefficient
Shared vision	7	Status quo	83.0
		Desirable situation	84.0
System thinking	7	Status quo	79.0
		Desirable situation	90.0
Learning organizational culture	10	Status quo	82.0
		Desirable situation	91.0
Flexible structure	8	Status quo	88.0
		Desirable situation	80.0
Personal mastery	8	Status quo	82.0
		Desirable situation	91.0
Transformational leadership	8	Status quo	90.0
		Desirable situation	93.0
Sharing knowledge	14	Status quo	93.0
		Desirable situation	95.0

According to Iglesias (2004), the internal consistency of all components was therefore higher than the minimum 0.70. The demographics of study participants were also collected in this study

(e.g., gender, academic rank, age, teaching experience). The information was collected via a postal survey. The SPSS software package was employed to carry out the analyses. To answer the first and second research questions, which were related to the extent of components in the status quo and the desirable situations for agricultural faculties, descriptive statistics using means and standard deviations were used to rank the components in these situations. To answer the third research question, a paired sample t-test was used to determine whether there were differences between the status quo and the desirable situation. To answer the fourth research question, which was related to the calculation of the organizational learning opportunity for each of the components, the organizational learning opportunity index (Leitch, 2006) was utilized to express a standardized ratio of the "how it is" and "how it should be" scores for each component. The following formula was used to compute the organizational learning opportunity index:

$$\text{Organizational learning opportunity index} = 100 \times \left(\frac{How\ it\ should\ be - how\ it\ is}{How\ it\ should\ be} \right)$$

This index can range in value from 0 per cent (no perceived opportunity for improvement) to 100 per cent (maximum opportunity for improvement); the higher the index, the greater the perceived opportunity for improvement in that component of the faculty.

Results

Descriptive Analysis

Respondents included 312 males (94.7%) and 17 females (5.3%). There were 55 (16.71%) instructors, 198 (60.18%) assistant professors, 57 (17.33%) associate professors and 19 (5.78%) full professors. The average age of respondents was 42, with a minimum age of 27 and a maximum age of 72. The average years of teaching experience was 11 with a minimum of 1 year and a maximum of 40 years.

The status quo and the desirable situation of components in agricultural faculties

The first and second research questions aimed to determine to what

extent the components have been practiced within the status quo and what they should be like in a desirable situation for agricultural faculties. Means and standard deviations were used to answer these questions. Table 1 shows that for the status quo, the highest mean was 2.72 for personal mastery and the lowest mean was 1.94 for sharing knowledge. The results indicate that agricultural faculties' members perceived the practice of learning to be below the average (3). In a desirable situation, the highest mean was 4.22 for personal mastery and the lowest mean was 4.03 for learning organizational culture. The findings show that the agricultural faculty members perceived all components to have been above the average (3) in a desirable situation (Table 3).

Table 3. Mean and standard deviations for the components in the status quo and desirable situation

Components	Mean*		Std. Deviation	
	Status quo	Desirable situation	Status quo	Desirable situation
Personal mastery	2.72	4.22	0.64	0.63
Learning organizational culture	2.70	4.03	0.61	0.59
Shared vision	2.67	4.13	0.63	0.61
Transformational leadership	2.67	4.15	0.73	0.65
System thinking	2.59	4.12	0.65	0.63
Flexible structure	2.51	4.12	0.67	0.65
Sharing knowledge	1.94	4.06	0.57	0.68

* Measured on a five-point Likert scale (very low = 1; very high = 5).

Differences between the status quo and desirable situation

The third research question aimed to determine whether there were significant differences in the faculty members' perception about the situation of the seven components in the status quo and desirable situations. A paired sample t-test was employed to answer this question. Table 4 shows that there were significant differences at the 0.001 level between the status quo and the desirable situations of each component of learning.

Table 4. Differences between the status quo and desirable situations

Components	Situation	N	Means	Std. Deviation	T value
Shared vision	Status quo	329	2.67	0.63	-29.12*
	Desirable	329	4.13	0.61	
System thinking	Status quo	329	2.59	0.65	-29.06*
	Desirable	329	4.12	0.63	
Learning organizational culture	Status quo	329	2.70	0.61	-27.99*
	Desirable	329	4.03	0.59	
Flexible structure	Status quo	329	2.51	0.67	-29.54*
	Desirable	329	4.12	0.65	
Personal mastery	Status quo	329	2.72	0.64	-30.19*
	Desirable	329	4.22	0.63	
Transformational leadership	Status quo	329	2.67	0.73	-26.88*
	Desirable	329	4.15	0.65	
Sharing knowledge	Status quo	329	1.94	0.57	-40.93*
	Desirable	329	4.06	0.68	

* $P \leq 0.001$

Organizational learning opportunities in agricultural faculties

In order to answer the fourth research question, the organizational learning opportunities of each component were calculated using the Leitchs' formula (Leitch, 2006). As Table 5 shows, the highest rank of organizational learning opportunity was derived for sharing knowledge (52.21), while the lowest rank was derived for learning organizational culture (33.00).

Table 5. Organizational learning opportunities for different components

Component	Organizational learning Opportunity	Ranks
Sharing knowledge	52.21	1
Flexible structure	39.07	2
System thinking	37.13	3
Transformational leadership	35.66	4
Personal mastery	35.54	5
Shared vision	35.35	6
Learning organizational culture	33.00	7

Discussion

The aim of the research was to evaluate the degree of organizational learning among the faculty members of agricultural colleges. In

general, the results show that learning orientation is below average. This result is in line with the results in Matin and Alavi's (2007) study conducted in administrative organizations in Qom Province. Based on their study, the learning capacity of organizations is below the average level.

With regard to shared vision, there was no congruence between the faculty members about the educational and research objectives of the faculty. This result shows that the respondents were less committed to sharing a vision for the future of agriculture and that there was no shared vision among top management, faculty members and students. In addition, it was surprising that respondents were not committed to societal needs and national agricultural development programmes. This finding is in line with the results of other studies (Zali *et al*., 2008; Abbasi *et al*., 2010) assessing organizational learning at Tehran University and contradicts the findings of a study by Khasawneh (2010) conducted at Hashemite University in Jordan, as well those of Reece (2004) in a study conducted at Murdoch University in Australia.

Regarding system thinking, the university faculty members considered themselves as independent individuals rather than members of a team. They also believed that there was no convergence between different people and the views of teams for achieving faculty goals. Furthermore, they emphasized the lack of attention given to reciprocal liaisons between the university and society. These findings are consistent with the results of Abbasi et al. (2010) yielded by a study conducted within Tehran Province public agricultural faculties, but differ from previous studies (e.g., Senge, 1990; Hejazi and Veisi, 2007; Khasawneh, 2010).

Furthermore, we found learning organizational culture of agricultural colleges' academic staff to be below the average. We also found agricultural faculty educational and research activities to be inflexible, indicating a lack of learning from previous failures. Additionally, attitudes to change reflected negative perspectives. These findings are consistent with those of Basu and Sengupta (2007) in a study conducted at IBS-K University in India, as well as that of Portfelt (2006) in a study conducted at Karlstad University in Sweden; however, they are inconsistent with the findings of Denison and

Mishra (1995). For example, Denison and Mishra (1995) consider flexibility, learning from failures and building change as critical characteristics of a learning organizational culture.

With respect to flexible organizational structure, the faculty did not perceive organizational structure as dynamic, but formal and centralized. These findings are consistent with previous studies (e.g., Zali *et al*., 2008; Abbasi, 2010), but differ from some other research perspectives (e.g., James, 2003; Ortenblad, 2004). In this regard, James (2003) emphasizes boundarylessness as a prerequisite of a learning organization. Ortenblad (2004) also emphasizes on being flat, decentralized and interaction among organization members as a structural characteristic of a learning organization.

With respect to the personal mastery component, respondents believed that learning opportunities, including sabbaticals and attending national and international conferences, were hardly provided and that there was no regular or systematic evaluation system for identifying the faculties' educational needs. Furthermore, in cases where opportunities and situations were available for professional development, faculty members themselves conducted them, and individual learning did not lead to group and organizational learning. In other words, as Smith (2003) expresses, faculties' professional development is more personal and psychological rather than organizational and institutional. This finding contradicts previous findings (Senge, 1990; Morales *et al*., 2006; Collinson and Cook, 2007; Khasawneh, 2010). These researchers claim providing conditions and motivations for developing individual competencies to be one of the prerequisites for realizing organizational learning in an educational organization.

With respect to transformational leadership, faculty members believed that their managers were not transformational leaders, but instead simply managers. Respondents believed that agricultural faculties' leaders did not offer a clear vision for their college and were not optimistic about the agricultural faculty future. They also thought that managers did not consider different perspectives when solving faculty problems. These findings are consistent with those of other studies conducted at Iranian universities (Rastemoghadam, 2005; Jafar Nejad, 2005; Zali *et al*., 2008; Salimi Moghadam, 2010), but are

inconsistent with the viewpoints and findings of Bass (1997) and James (2003). Bass (1997) introduces four characteristics for transformational leaders: idealized influence, inspirational motivation, intellectual stimulation and individual consideration, while James (2003) believes leadership in a learning organization to be transformational.

The knowledge sharing component, when compared to other components of learning organization, had the lowest rank in the status quo of agricultural faculties. In this regard, agricultural faculty members believed that the opportunity for learning from the achievements of other universities and organizations was not provided. No interdisciplinary teaching and research activities were provided and as a result, different departments worked independently. The scientific and practical experiences of executive sectors were not employed in the teaching process and the results of faculty and student research were not implemented for improving faculty and agricultural sector performance. These results support those of Zali *et al.* (2008) and Abbasi (2010), but are inconsistent with the findings of Willcoxson (2001), Kezar (2005) and Collinson and Cook (2007). These scholars believe that knowledge creation and acquisition new knowledge; share and dissemination; and eventually the application of them are unnecessary for building a learning organization.

The faculty members of Iranian agricultural faculties perceived more than average (3) desirable situation of the seven learning organization components. This suggests that agricultural faculties' status quo, with respect to learning organization characteristics, is not desirable and that faculty members' expectations reach far beyond this status. Another strand of results indicates that significant differences exist in the perception of faculty members about the seven learning organization components, the status quo and desirable situations for agricultural faculties. This is reasonable, taking into account that Iranian agricultural faculties are not learning organizations and that there is a large gap between the status quo and desirable situations in these faculties.

The opportunity provided by every component for transforming agricultural faculties into learning organizations was another aspect of this study. The comparison between learning opportunities revealed

that knowledge sharing, a flexible organizational structure and system thinking will provide the most organizational learning opportunities for turning agricultural faculties into learning organizations. Among these, knowledge sharing was the most important component, although it featured at the lowest level with respect to the status quo (Lopez *et al*., 2004; Morales *et al*., 2006). We found that the organizational learning process played an important role in transforming organizations into learning establishments. In other words, agricultural faculties can improve their performance and become learning organizations by creating and acquiring new knowledge from internal and external resources, and through the dissemination and sharing of knowledge with co-workers and other departments. It is clear that a dynamic and flexible organizational structure, as well as systematic thinking among faculties, students and staff will facilitate this process.

Conclusion and Recommendations

The agriculture faculty members perceived that learning organization components were not presented in the environment of the School of Agriculture in Iran. Our results showed that these schools were not "learning organizations". Learning organization components provide opportunities for agricultural faculties to learn and become learning organizations.

Based on the above results and discussions, the current study offers several recommendations. Considering the gap between the status quo and the desirable situation regarding learning organization components, it is suggested that this gap be viewed as an opportunity for upgrading the quantity and quality of activities within agricultural faculties in order to improve their performance. In addition, it is recommended that regular and periodical assessments of current situations of learning orientation be conducted (internal evaluation) in a bid to offer the learning organization a clear vision (strategic formation), and to identify organizational learning opportunities and formulate appropriate transformation formulae into a learning organization (correction and improvement). Moreover, faculty members are encouraged to share their knowledge, be flexible within

organizational structure and to implement system thinking. With respect to sharing knowledge, providing experiential and practical educational opportunities for students, utilizing expert experiences from external resources, providing perquisites for creating group ideas and supporting creative ideas, as well as forming interdisciplinary research teams are also recommended.

Furthermore, forming interdisciplinary teaching teams, establishing interdisciplinary majors in order to upgrade teaching and research culture, conducting meetings for conveying new experiences and ideas and exchanging successful experiences among departments are among the suggestions outlined for disseminating and sharing created knowledge.

Additionally, applying the information system for clear communication among different departments using an intuitive approach (e.g., prints and electronic bulletins for facilitating information flow), establishing a rewarding system for encouraging group research activities and active attendance at national and international conferences are recommended.

In sum, this study provides a different perspective of learning orientation in the context of agricultural faculties. The results highlight the advantages of implementing changes at individual, team and organizational levels in a bid to propel faculties towards becoming learning organizations.

References

Abbasi, E. & Hedjazi, Y. (2010). "The role of leadership, culture and organizational learning in promotion of Iranian agricultural faculties' performance". *Quarterly Journal of Research and Planning in Higher Education*, 16(2), 61-79.

Abbasi, E. (2010). *Designing and explaining agricultural learning university model*. PhD dissertation, University of Tehran, Iran.

Abbasi, E.; Hejazi, Y.; Irvani, H.; Zali, M. R. & Alavi, S. B. (2012). "Organizational learning in agricultural faculties of Tehran province". *Iranian Journal of Agricultural Economics and Development Research*, 42- 2(2), 175-184.

Ahmadian, H. R. (2004). *Education and its attitude in wisdom society*. In: Proceeding of the second conference on E- learning, Tehran, Iran.

Alegre, J. & Chiva, R. (2007). "Assessing the impact of organizational learning capability on product innovation performance: An empirical test". *Technovation*, doi: 10.1016/j. technovation. 2007.09.003.

Argyris, C. & Shön, D. (1978). *Organizational learning: A theory of action Perspective, reading*. MA: Addison – Wesley Publishing Company.

Bass, B. M. (1997). "Does the transformational - transactional leadership paradigm transcend organizational and national boundaries?". *American Psychology*, 52(2), 130 -139.

Basu, B. & Sengupta, K. (2007). "Assessing success factors of knowledge management initiatives of academic institutions: A case of an Indian business school". *The Knowledge Management*, 5(3), 273-282.

Bell, S.J.; Whitwell, G.J. & Lukas, B.A. (2002). "Schools of thought in organizational learning". *Journal of the Academy of Management Science*, 30(1), 70-86.

Bhatnagar, J. (2006). "Measuring organizational learning capability in Indian managers and establishing firm performance linkage". *The Learning Organization*, 3(5), 416-433.

Chiva, R.; Alger, J. & Lapiedra, R. (2007). "Measuring organizational learning capability among the workforce". *International Journal of Manpower*, 28(3/4), 224-242.

Collinson, V. & Cook, T. F. (2007). *Organizational learning: Improving learning, teaching, and leading in school system*. Sage Publications, Ltd, USA.

Cyert, R. M. & March, J. G. (1963). *A Behavioral Theory of the Firm* (2nd ed). Prentice Hall, Englewood Cliffs, NJ.

Daft, R.L. & Weick, K.E. (1984). "Toward a model of organizations as interpretation systems". *Academy of Management Review*, 9(2), 284-95.

Denison, D. R. & Mishra, A. K. (1995). "Toward a theory of organizational culture and effectiveness". *Organization Science*, 6(2), 204-223.

Dickson, Peter R. (1996). "The Static and dynamic mechanics of competition: A comment on hunt and Morgan's comparative advantage theory". *Journal of Marketing*, 60(4), 6-102.

Dodgson, M. (1993). "Organizational learning: A review of some literature". *Organization Studies,* 14(3), 375-394.

Garvin, D. (1993). "Building a learning organization". *Harvard Business Review*. 71(4), 78-91.

Goh, S. C. (1998). "Toward a learning organization: The strategic building blocks". *Advanced Management Journal*, 63(2), 15-20.

Goh, S.C. & Richards, G.R. (1997). "Benchmarking the learning capability of organization". *European Management Journal*, 15(5), 575-583.

Gomez, P. ; Cespedes-Lorente, J. & Valle-Cabrera, R. (2005). "Organizational learning capability: A proposal of measurement". *Journal of Business Research*, 58(6), 715-725.

Hejazi, Y. & Veisi, H. (2008). "Determining components of organizational learning in institutes of agricultural higher education". *Quarterly Journal of Research and Planning in Higher Education*, 13(4), 45-65.

Henri, J. F. (2006). "Management control systems and strategy: A resource-based perspective". *Accounting, Organizations and Society,* 31(6), 529-558.

Huber, G.P. (1991). "Organizational learning: the contributing processes and the literatures". *Organization Science*, 2(1), 88-115.

Hult, G.T.M. & Ferrel, O.C. (1997). "Global organizational learning capability in purchasing construct and measurement". *Journal of Business Research*, 40(2), 97-111.

Iglesias, V. (2004). "Perceptions about service. How much do they influence quality evaluations?". *Journal of Service Research*, 7(1), 90-103.

Ipe, M. (2003). "Knowledge sharing in organizations: A conceptual framework". *Journal of Human Resource Development Review*, 2(4), 337-359.

Jafar Nejad, A.; Zali. M. R. & Behzadi, S. (2005). *Assessing organizational learning in Tehran state university*. Deputy of research, Tehran University.

James, C. R. (2003). "Designing learning organization". *Organizational Dynamics*, 32(1), 46-61.

Kandemir, D., & Hult, G.T. (2004). "A conceptualization of an organizational learning culture in international joint ventures". *Industrial Marketing Management*, 34(5), 430-439.

Kezar, A. (2005). "What campuses need to know about organizational

learning and the learning organization?". *New Direction for Higher Education*,131, DOI: 10.1002/he.183. 7-22.

Khasawneh, S. (2010). "Learning organization disciplines in higher education institutions: An approach to human resource development in Jordan". *Innovative Higher Education*, doi 10.1007/s10755-010-9170-8.

Krejcie, R. V. & Morgan, D. W. (1970). "Determining sample size for research activities". *Educational and Psychological Measurement*, 30, 607-610.

Lee, J.N. (2001). "The impact of knowledge sharing, organizational capability and partnership quality on IS outsourcing success". *Information and Management*, 38(5), 323-335.

Leitch, C. (2006). *An action research approach to entrepreneurship*. In: Neergaard, H., and J. P. Ulhoi (eds.), Handbook of Qualitative Research Method in Entrepreneurship. Edward Elgar Publishing, Inc.

Levitt, B. and J.G. March (1988). "Organizational learning". *Annual Review of Sociology*, 14, DOI: 10.1146/annurev.so.14.080188.001535. 319-340.

Lopez, S. P. Peon, J. M. M. & Ordas, C. J. V. (2004). "Managing knowledge: The link between culture and organizational learning". J*ournal of Knowledge Management*, 8(6), 93-104.

Meel, R.M.V. (1997). "How to augment effectiveness and flexibility by curriculum development in Agricultural Higher Education". *The Journal of Agricultural Education and Extension*, 4(3), 151 - 161.

Morales, V. J. G. Martin, F. J. & Sanchez, R. (2006). "Strategies factors and barriers for promoting educational organizational learning". *Teaching and Teacher Education*, 22(4), 478-502.

Naderi Khorshidi, A. (2002). *Designing a model for development of organizational learning capability in Iran Khodro Cooperative*. Unpublished Ph.D. dissertation, University of Tehran.

Ortenblad, A. (2004). "The learning organization: Towards an integrated model". *The Learning Organization*, 11(2), 129-144.

Portfelt, S. I. (2006). *The university: A learning organization? An illustrative based on system theory*. Unpublished PhD dissertation, Karlstad University, Sweden.

RasteMoghadam, A. (2005). *Study of AllamehTabatabaee University as a learning organization (Manager's points of view)*. Unpublished thesis, University of Allame Tabatabaee, Iran.

Reece, D.P. (2004). *Universities as learning organization: How Australian Universities become learning organizations?*. Unpublished PhD dissertation, Murdoch University, Australia.

Salimi Moghadam, Z. (2010). *Investigation of Wick and Leon's learning organization components in Ferdowsi University*. M.Sc. thesis, University of Ferdowsi, Iran.

Senge, M. P. (1990). *The Fifth Discipline: The art and Practice of the Learning Organization*. Doubleday / Currency, New York.

Shrivastava, P. (1981). *Strategic decision-making process: The influence of organizational learning and experience.* Doctoral Dissertation, Pittsburg University, Pitsburg.

Smith, H. B. (2003). *The university as a learning organization: Developing a conceptual model*. PhD dissertation, Montana State University, Bozeman, Montana.

Spicer, D.P. (2004). *Organizational learning and performance in SMEs. Working Paper Series, School of Management.* University of Bradford, Bradford

Spicer, D.P. and E. Sadler-Smith (2006). "Organizational learning in smaller manufacturing firms". *International Small Business Journal,* 24(2), 133-158.

Tajeddini, K. (2009a). "The impact of learning orientation on NSD and hotel performance: Evidence from the hotel industry in Iran". *Education, Business and Society: Contemporary Middle Eastern Issues*, 2(4), 262-275.

Tajeddini, K. (2009b). "Perceptions of learning among Swiss watch managers". J*ournal of Workplace Learning,* 21(7), 525-537.

Willcoxson, L. (2001). *Strategies for changing a university into a learning organization*. In: Richardson, L. and J. Lidston (eds). Flexible learning for a flexible society, pp. 720-731. Processing of ASET-HERDSA 2000 cofrences Toowoomba, Qld, 2-5 July /2000, ASET and HERDSA.

Zali, M. R.; Razavi, S. M. & Fremerey, M. (2008). *Assessment organizational learning at University of Tehran*, *survey of member faculty and managers.* Unpublished.

Zarei Matin, H. & Akhawan Alavi, S. H. (2007). "Identifying the barriers of developing organizational learning in administrative organizations". *Iranian Journal of Management Studies*, 1(1), 17 -38.