# LEARNING ORGANIZATION DISCIPLINE IN IRANIAN HIGHER EDUCATION SYSTEM

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**Abstract**
The purpose of this study was to investigate learning organization discipline, as proposed by Senge (1990), in one of the leading state universities in Iran, Tarbiat Modares University (TMU). The research method was a survey and descriptive- correlation techniques. The population consisted of all faculty members in the TMU (N= 513). Using Krejcie and Morgan Table, 220 faculty members selected as sample. Data collected using LOQS developed by Park (2006), and Park and Rojewski (2006). The results of the research indicated only team learning has less than moderate application as indicated by mean value (M= 2.97). The results of compare means showed that there was no significant difference in the perceptions of academic members based on their gender regarding to the application of five disciplines. Although, there was a significant difference in the perception of academic staffs with different ranks, and teaching experiences regarding to the application of personal mastery, and team learning and shared vision, respectively.

**Key Words**: Organizational learning, Learning organization, Higher education, Iran.

## INTRODUCTION

In an ever-changing world, learning is considered as the only sustainable competitive advantage (De Gause, 1988) and is the key to survival and development for organizations. Therefore, the organizations that learn faster and better than the others competitors are more successful. In the recent years, organizational learning and learning organization are taking into consideration as new organizational paradigms and have had considerable growth among industrial and educational organizations. In order to maintain in a competitive edge, university as an organization must realize and respond to the changes. To achieve this, universities must become a learning organization. The concept of learning organization focuses on learning as a tool, a lever, and a philosophy for sustainable change and renovation in organizations in a fast changing world. Learning organization provides opportunities and resources to balance the personal and professional growth needs of employees and encourage them to use new skills in innovative ways (Khasawneh, 2010).

The concept of learning organization has attracted significant attention from both scholars and practitioners. Senge (1990), Pedler et al. (1991), Watkins and Marsick (1993), and Marquardt (1996) have each provided distinct contributions to the study of learning organization. Senge's (1990) and Pedler et al. (1991) present learning organization through a reflection of the actual understanding and/or achievement by practitioners within organizations. In contrast, Marquardt's (1996) approach is more applied, taking the form of how-to guide than a new contribution to the theory, which is in line with Watkins and Marsick (1993), who are concerned with the specifics of actions and behaviours than with concepts. Senge (1990) defined the learning organization as one " where people continuously expand their capacity to create the results they truly desire, where new an expansive patterns of thinking are nurtured, where collective aspiration is set free, and where

people are continually learning how to learn together". Based on this definition, Senge (1990) proposed five disciplines associated with a learning organization. These disciplines are personal mastery, mental models, shared vision, team learning, and system thinking.

- Personal mastery is a discipline of "continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively" to achieve individual results. Individuals may learn new skills and apply those skills on the job. As one master this discipline, one can see the connection in the organization between individual learning and organizational learning to achieve success.
- Mental models are "deeply ingrained assumptions, generations, or even pictures and images that influence how we understand the world and how we take action". When establishing mental models, Senge emphasized that "people need to maintain a balance between inquiry and advocacy, where people expose their own thinking effectively and make that thinking open to the influence of others". Mental models are important to organizations because those individual differences can create disagreement in the workplace.
- Shared vision means that individual visions or goals are integrated into a shared and meaningful organizational vision. All members of the organization must understand and contribute to the vision of the organization. By working together to create the vision and then working to incorporate that vision into each unit or part of the organization, we can create a focus that will guide all parts of the organization.
- Team learning is another key component of the learning organization, because teams are the fundamental learning unit. Working as a team, members of the organization must learn to suspend assumptions about how things are done and must act as colleagues, putting aside individual defensiveness to create an open environment for dialog and discussion. Team learning consists of the capacity of team members to "suspend assumptions and think together as a whole". According to Senge (1990), "unless teams can learn, the organization cannot learn".
- System thinking is the fifth discipline, which integrates all the other four disciplines to examine and improve the organization. System thinking is defined as the ability to see the big picture, to see the interrelationships of a system, to move beyond a simple cause and effect approach to seeing the continuous process. In system thinking, we move from seeing the individual parts of a system to understanding that the system is the interactions of those parts. By looking at the system as a whole, we can begin to see new opportunities for solving problems and for implementing change.

A significant number of scholars within the learning organization area consider Senge's model to be the most suitable framework for organizational development in business and educational organization (Jamali et al., 2006; Smith, 2003; Hedjazi and Veisi, 2007; Abbasi, 2010; Khasawneh, 2010).

Based on the above, this study was based upon two research questions. 1) To what extent, as perceived by faculty members, have the components (personal mastery, mental models, shared vision, team learning, and system thinking) been practiced in the Tarbiat Modares University environment and 2) Whether or not there were significant differences in the faculty members' perceptions about the learning organization disciplines based on their gender, academic rank, and years of teaching experience.

## MATERIALS AND METHODS

The research method was descriptive- correlation and it was carried out through a survey method. The target population for this study was all faculty members at the Tarbiat Modares University for the academic year 2010 -11. A list of faculty members was obtained from the Registrar's Office to determine the population frame for the study after gaining permission to conduct the study on campus. According to the list, the target population was 513 participants. Using Kerjcie and Morgan's (1970) table and stratified random sampling, 220 faculty members were selected as sample. Of those, 201 usable surveys were returned, yielding a response rate of 91.36%.

The Learning Organization Questionnaire for all Schools (LOQS), which developed by Park (2006) and Park and Rojewski (2006) used to collect the data. This survey was designed to evaluate the extent to which the learning organization disciplines, as proposed by Senge (1990), exist in a higher education environment as perceived by

faculty members. The LOQS includes five sub-scales related to each learning organization discipline. The 35 items for all sub-scales were rated on a Likert-type scale: 1 "Strongly Disagree," 2 "Disagree," 3 "Neutral," 4 "Agree," and 5 "Strongly Agree." These subscales were personal mastery (6 items), mental models (8 items), shared vision (7 items), team learning (7 items), and systems thinking (7 items). Face and d content validity of the questionnaire was determined by expert's judgment. A pilot test was conducted to determine the reliability of the questionnaire. Cronbachs' Alpha coefficient was estimated from 0.79 to 0.86 with an overall internal consistency value for 35 items equal to 0.87. The calculated coefficient Alpha reliability for the five sub-scales was as follows: personal mastery ($\alpha$=0.81), mental models ($\alpha$=0.79), shared vision ($\alpha$=0.79), team learning ($\alpha$=0.82), and systems thinking ($\alpha$=0.86).

We contacted the faculty members either included in the sample in person or by telephone, explained the nature and goals of the study, and assured confidentiality and anonymity. The participants were also informed that the survey would take less than 15 minutes to complete. The faculty members who agreed to participate in the study were given the survey and were requested to complete it within three weeks. At the end of the three weeks, paper surveys were collected.

The SPSS statistical package version 18 was employed to carry out analyses. To answer the first research question, which is related to the extent of application of the five learning organization disciplines in the Tarbiat Modares University environment as perceived by faculty members, descriptive statistics were used to compute means and standard deviations for variables and items of the five sub-scales of the learning organization disciplines. To determine the level of participants' responses to each item based on the five point Likert-type scale, we followed these classifications (Khasawneh et al. 2007): 1–1.99: low; 2–2.99: low-to moderate; 3–3.99: moderate-to-high; 4–5: high-to-very high.

To answer the second research question, which is related to the significant differences in the perceptions of faculty members about the learning organization disciplines, based on demographic characteristics of faculty members including gender, academic rank, and years of teaching experience, independent t-tests and analysis of variance (ANOVA) were used.

**RESULTS AND DISCUSSION**

The sample distribution was 168 males (83.6%) and 33 females (16.4%). There were 39 (19.4%) instructors, 63 (31.3%) assistant professors, 61 (30.3%) associate professors, and 38 (18.9%) professors. Of the 201 respondents, 58 (28.2%) had fewer than 5 years teaching experience, 36 (17.9%) had between 5 and 10 years of teaching experience, 64 (31.8%) had between 12 and 17 years, and 8 (21.4%) had more than 18 years teaching experience.

**The Learning Organization Disciplines**
The first research question was to determine the extent, as perceived by faculty members, to which the learning organization disciplines have been practiced in the Tarbiat Modares University environment. Means and standard deviations were used to answer this question. Starting with the means, Table 1 shows that the lowest mean for the learning organization disciplines is 2.97 for team learning and the highest mean is 3.54 for "personal mastery". The overall mean score for all disciplines is 3.21. Based on the Khasawneh et al. (2007) classification, this result indicated that university faculty members perceived the practice of the learning organization disciplines as moderate-to high. Each discipline is discussed in the following:

Table 1: Means and standard deviations for the learning organization disciplines

| Dimension | Means | Standard deviations |
|---|---|---|
| Personal Mastery | 3.54 | 0.71 |
| Mental Models | 3.20 | 0.66 |
| Shared Vision | 3.10 | 0.73 |
| Team Learning | 2.97 | 0.77 |

| | | |
|---|---|---|
| Systems Thinking | 3.28 | 0.93 |
| Average | 3.21 | 0.65 |

*Discipline 1, Personal Mastery*: For the first discipline, the mean values and standard deviations for responses are presented in Table 2. The overall mean score for all items was 3.54, indicating moderate-to-high application of this discipline in the university environment. While Item 4 had the highest mean value (3.63), item 3 had the lowest mean value (3.30).

Table 2: Means and standard deviations for the items of the personal mastery discipline

| Items | Mean | Std. Deviation |
|---|---|---|
| 1. Our faculty members at the university engage in continuous learning and reflection activities to achieve personal growth. | 3.59 | 1.10 |
| 2. Our faculty members continually work to clarify their professional growth. | 3.61 | 0.98 |
| 3. Our faculty members view the current reality more clearly in terms of targeting their career goals. | 3.30 | 0.93 |
| 4. Our faculty members have learning opportunities in their teaching and other professional work. | 3.63 | 0.90 |
| 5. At the university, our faculty members continually learn to bridge the gap between their current reality and the desired future. | 3.62 | 1.03 |
| 6. Our faculty members strive to supplement their lack of skills and knowledge in their teaching and subject area. | 3.53 | 0.99 |
| Average | 3.54 | 0.71 |

*Discipline 2, Mental Models*: For the second learning organization discipline, mental models, the overall rating of the eight items was 3.20, indicating moderate-to-high perception of this discipline. As shown in Table 3, the highest mean value was for item 3 (3.55), and the lowest mean value was for item 5 (2.62).

Table3: Means and standard deviations for the items of the mental model discipline

| Items | Mean | Std. Deviation |
|---|---|---|
| 1. Our faculty members often reflect on assumptions of university activities with each other to ensure they are in line with educational principles. | 3.13 | 0.96 |
| 2. Our faculty members inquire about the appropriateness of their own course or program with respect to the goals of university. | 3.13 | 0.97 |
| 3. Our faculty members learn and change as a result of students' reactions during teaching. | 3.55 | 1.11 |
| 4. Our faculty members change their own pattern or unique teaching style to implement new approaches. | 3.31 | 1.07 |
| 5. Our faculty members actively explore their assumptions and ideas with each other about educational practices. | 2.62 | 1.04 |
| 6. Our faculty members often use the significant events of classrooms to think about their beliefs of education and educational practices. | 3.29 | 1.09 |
| 7. Our faculty members are very aware of how their beliefs and assumptions affect their educational practices. | 3.23 | 1.00 |
| 8. Our faculty members can effectively explain their assumptions underlying their reasoning. | 3.31 | 0.99 |

| | | |
|---|---|---|
| Average | 3.20 | 0.66 |

*Discipline 3, Shared Vision:* With regard to the third learning organization discipline, shared vision, the rating of the seven items was 3.10, indicating moderate-to-high perception of this discipline in the university environment. As shown in Table 4, the highest mean value was for item 1 (3.37) while item 6 had the lowest mean value (2.94).

Table 4: Means and standard deviations for the items of the shared vision discipline

| Items | Mean | Std. Deviation |
|---|---|---|
| 1. Our faculty members and staff work to build the university's vision and goals. | 3.37 | 1.10 |
| 2. Our faculty members develop their personal goals to align with the whole university vision or goals. | 2.99 | 1.11 |
| 3. Our faculty members align personal class or teaching goals with the university vision or goals. | 3.02 | 1.10 |
| 4. Our academics feel comfortable in sharing ideas with other teachers about the university vision. | 3.14 | 1.11 |
| 5. Our faculty members are committed to a shared vision for the future of our university. | 3.08 | 1.09 |
| 6. Our faculty members agree on principles necessary to achieve ideal vision. | 2.94 | 1.06 |
| 7. When changing educational practices, our faculty members consider the impact on the university vision and goals. | 3.16 | 1.01 |
| Average | 3.10 | 0.73 |

*Discipline 4, Team Learning*: Participants responded to seven items within the category of team learning among faculty members. Table 5 displays the mean values and standard deviations for their ratings of these items. The overall mean value for all items was 2.97, indicating low- to moderate application of this discipline in the university environment. While item 6 had the highest mean value (3.40), item 1 had the lowest mean value (2.70).

Table 5: Means and standard deviations for the items of the team learning discipline

| Items | Mean | Std. Deviation |
|---|---|---|
| 1. Our faculty members feel free to ask questions of other teachers or staff regardless of gender, age, and professional status at the university. | 2.70 | 1.13 |
| 2. In our university, group or team activities are used in faculty professional development activities. | 2.82 | 1.08 |
| 3. Our faculty members are treated equally in team or committee activities. | 2.82 | 1.13 |
| 4. Our faculty members share information across course subjects with other colleagues. | 2.84 | 1.06 |
| 5. Our faculty members believe that sharing information or knowledge through team activities is useful for complex university problems. | 3.30 | 1.19 |
| 6. Our faculty members respect other colleagues' ideas and opinions by viewing them from their colleagues' perspective. | 3.40 | 1.01 |
| 7. Our faculty members participate in open and honest conversations to share their educational best practices. | 2.88 | 1.09 |

| | | |
|---|---|---|
| Average | 2.97 | 0.77 |

*Discipline5, Systems Thinking*: For the fifth learning organization discipline, systems thinking in the work environment, there were seven items. The mean values and standard deviations for faculty members' responses are presented in Table 6. The overall mean score for all items was 3.28, indicating moderate-to high agreement that the systems thinking discipline was practiced in the university environment. While item 4 had the highest mean values (3.46), item 3 had the lowest mean value (2.97).

Table 6: Means and standard deviations for the items of the systems thinking discipline

| Items | Mean | Std. Deviation |
|---|---|---|
| 1. When developing lesson plans, our faculty members consider the different needs and abilities of students. | 3.18 | 1.18 |
| 2. When changing educational practices, our faculty members consider the impact on their results to the inside and outside of university. | 3.10 | 0.96 |
| 3. When dealing with a student discipline problem, our faculty members consider the impact on other faculties. | 2.97 | 0.91 |
| 4. At the university, our faculty members regard educational issues as a continual process rather than with a snapshot or event. | 3.46 | 0.92 |
| 5. Our faculty members attentively link the current schooling with students' career pathways. | 3.25 | 0.99 |
| 6. When changing and creating university rules, consistency with the policy of the government and educational act is considered. | 3.45 | 0.87 |
| 7. Our faculty members consider the effect on students when dealing with university challenge. | 3.29 | 0.95 |
| Average | 3.28 | 0.93 |

Learning Organization Disciplines and Demographics

The second research question was to determine whether or not there were significant differences in the faculty members' perceptions about the learning organization disciplines based on gender, academic rank, and years of teaching experience.

A T-Test for independent samples was used to examine the difference between male and female faculty members. However, one-way analysis of variance was used to determine whether the variations of the four level groups of academic rank and years of teaching experience were equal or significantly different.

Table 7 shows that there were no significant differences between the perceptions of male and female faculty members about the learning organization disciplines.

Table 7: The differences between male and female academics

| Dimensions | Gender | n | Means | Std. Deviations | t | *p* |
|---|---|---|---|---|---|---|
| Team Learning | M | 168 | 3.01 | .79 | 1.661 | .094 |
| | F | 33 | 2.76 | .65 | | |
| Shared Vision | M | 168 | 3.17 | .71 | .934 | 3.222 |
| | F | 33 | 2.74 | .68 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mental Models | M | 168 | 3.21 | .69 | .124 | -.065 | |
| | F | 33 | 3.20 | .47 | | | |
| Systems Thinking | M | 168 | 3.30 | 1.00 | .545 | .062 | |
| | F | 33 | 3.20 | .49 | | | |
| Personal Mastery | M | 168 | 3.56 | .73 | .109 | .525 | |
| | F | 33 | 3.48 | .58 | | | |

Utilizing one-way analysis of variance, as illustrated in Table 8, there were no significant differences in the perceptions of the four groups of academic rank (instructor, assistant professor, associate professor and professor), except about personal mastery discipline.

Table 8: The differences among the four level groups of academic rank

| Dimension | Academic rank | n | Mean | Sum of squares | | df | F | p |
|---|---|---|---|---|---|---|---|---|
| Team Learning | Instructor | 29 | 3.07 | Between Groups | .916 | 3 | .50 | .680 |
| | Assistant Professor | 70 | 2.92 | Within Groups | 119.19 | 197 | | |
| | Associate Professor | 64 | 3.05 | Total | 120.10 | 200 | | |
| | Professor | 38 | 2.89 | | | | | |
| Shared Vision | Instructor | 29 | 3.40 | Between Groups | 1.558 | 3 | .92 | .407 |
| | Assistant Professor | 70 | 2.99 | Within Groups | 105.30 | 197 | | |
| | Associate Professor | 64 | 3.19 | Total | 106.85 | 200 | | |
| | Professor | 38 | 3.17 | | | | | |
| Mental Models | Instructor | 29 | 3.12 | Between Groups | 1.55 | 3 | 1.188 | .316 |
| | Assistant Professor | 70 | 3.14 | Within Groups | 86.21 | 197 | | |
| | Associate Professor | 64 | 3.19 | Total | 87.77 | 200 | | |
| | Professor | 38 | 3.16 | | | | | |
| Systems Thinking | Instructor | 29 | 3.59 | Between Groups | 1.01 | 3 | .37 | .768 |
| | Assistant Professor | 70 | 3.28 | Within Groups | 175.41 | 197 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Associate Professor | 64 | 3.35 | Total | 176.42 | 200 | | |
| | Professor | 38 | 3.29 | | | | | |
| Personal Mastery | Instructor | 29 | 3.00 | Between Groups | 8.280 | 3 | 5.79 | .001** |
| | Assistant Professor | 70 | 3.35 | Within Groups | 93.83 | 197 | | |
| | Associate Professor | 64 | 3.82 | Total | 102.11 | 200 | | |
| | Professor | 38 | 3.40 | | | | | |

**p ≤0.001

Table 9 shows that there were significant differences for 3 disciplines (team learning, shared vision and personal mastery) among the four teaching experience level groups (below 5 years, 5–11 years, 12–17 years, and 18 years and above).

Table 9: The differences among the four teaching experience level groups

| Mean | Experience (year) | n | Mean | Sum of squares | | df | F | p |
|---|---|---|---|---|---|---|---|---|
| Team Learning | <5 | 58 | 2.97 | Between Groups | 6.688 | 3 | 3.872 | .010* |
| | 5–11 | 36 | 2.82 | Within Groups | 113.419 | 197 | | |
| | 12–17 | 64 | 3.20 | Total | 120.107 | 200 | | |
| | >18 | 43 | 2.74 | | | | | |
| Shared Vision | <5 | 58 | 3.00 | Between Groups | 5.102 | 3 | 3.292 | .022** |
| | 5–11 | 36 | 3.03 | Within Groups | 101.756 | 197 | | |
| | 12–17 | 64 | 3.33 | Total | 106.858 | 200 | | |
| | >18 | 43 | 2.96 | | | | | |
| Mental Models | <5 | 58 | 3.06 | Between Groups | 2.261 | 3 | 1.736 | .161 |
| | 5–11 | 36 | 3.15 | Within Groups | 85.516 | 197 | | |
| | 12–17 | 64 | 3.32 | Total | 87.777 | 200 | | |
| | >18 | 43 | 3.24 | | | | | |
| Systems Thinking | <5 | 58 | 3.32 | Between Groups | 4.399 | 3 | 1.679 | .173 |
| | 5–11 | 36 | 2.97 | Within Groups | 172.029 | 197 | | |
| | 12–17 | 64 | 3.38 | Total | 176.428 | 200 | | |
| | >18 | 43 | 3.34 | | | | | |
| Personal Mastery | <5 | 58 | 3.33 | Between Groups | 10.801 | 3 | 7.767 | .001*** |
| | 5–11 | 36 | 3.30 | Within Groups | 91.313 | 197 | | |

| 12–17 | 64 | 3.85 | Total | 102.114 | 200 |
| >18 | 43 | 3.58 | | | |

*p ≤0.01, **p ≤0.05, ***p ≤0.001

## DISCUSSION

The faculty members in this particular university perceived moderate-to-high practice of the four learning organization disciplines (personal mastery, mental models, share vision, and system thinking) and low- to moderate practice of the team learning discipline.

With regard to the personal mastery discipline, faculty members indicated that they engage in continuous learning opportunities to achieve personal and professional growth and to decrease the gap between their current and desirable situation. In addition, they use the teaching and other educational and research activities as an opportunity for learning. This result is in line with the results of Smith (2003) and Khasawneh (2010) studies.

Regarding to mental models discipline, respondents indicated that there is congruence between the individual and university goals, they collaborate with each other for discovering new ideas and assumptions, and they are aware of the impact of their believes and assumptions on their educational activities. This result is consistent with previous researches (Khasawneh, 2010; Hejazi and Veisi, 2007).

With regard to the shared vision, the faculty members at Tarbiat Modares University including managers and other academic staffs are committed to a shared vision for the future of the institution, there is congruence between educational and research goals of the university. In addition, the academic members are committed to the society needs and national development programs. This result is not in line with the results of other studies (Zali et al., 2008; Abbasi, 2010), assessing organizational learning in Tehran University, and is in line with Khasawneh's (2010) results in Hashemite University in Jordan and Reece's (2004) results in Murdoch University in Australia.

Despite the other disciplines, university faculty members perceived the practice of team learning as low- to moderate. It seems that faculty does not frequently work on joint projects with other faculty members and does not feel free to ask questions of other teachers or staff regardless of gender, age, and professional status at the university. Moreover, they do not share information with colleagues to solve complex university problems, respect other colleagues' ideas and opinions, and provide open and honest feedback to one another. This result is not consisted with previous researches (Smith, 2003; Khasawneh, 2010).

The University environment was also characterized as promoting systems thinking among its members. To elaborate, faculty members regard educational issues as a continual process rather than with a snapshot or event, and when changing and creating university rules, consistency with the policy of the government and educational act are considered. These results are consistent with the views of Senge (1990) and Marquardt (2002).

Another strand of results regarding demographic variables indicated that no significant differences exist in the perceptions of faculty members about the five learning organization disciplines based on gender. This result indicated that both women and men have the similar perception about applying the five disciplines in their university.

The results also indicated that faculty members, based on their rank, show significant differences in their perceptions regarding to the personal mastery discipline. According to the mean value, associate professors have the highest and instructors have the lowest mean. It can be said that associate professors in Tarbiat

Modares University, based on their experiences in teaching and research, are more motivated to reach to the high level (becoming Professor). Vice versa, the instructors have little motivation to improve themselves.

Other results show, that significant differences exist among the three disciplines (personal mastery, shared vision and team learning) with respect to the teaching experience level, in favor of faculty members with 12-17 years of teaching experience. It seemed that most of the faculty members with 12-17 years teaching experience are associate professors or professors, so as it mentioned above, these faculty members are motivated to improving their professional situation (personal mastery). In addition, because of the more familiarity with the university it seemed that they have common vision with their colleagues and are committed to university goals (shared vision) and doing their work in groups (team learning).

## CONCLUSION AND RECOMMENDATIONS

Based on the stated results, this is reasonable given the fact that the Tarbiat Modares University is striving to be a learning organization. As indicated earlier, faculty members are committed to life-long learning by updating their skills for personal and professional growth. They challenge their values and assumptions about educational practices; align their vision and goals with the vision and goals of the university and view their actions from a systems perspective.

However, there is not environment promoting teamwork for sharing faculty members their experiences with other colleagues. From the practical standpoint, faculty members at Iranian universities should be encouraged to do interdisciplinary teaching and research. Establishment the related interdisciplinary courses is one of the important ways for doing joint teaching and research. In addition, supporting, financially and emotionally, and priority to the team works encourage the faculty members to participate in team activities.

This research, regarding to insufficient of experiential researches in the field of learning organization in higher education institutes of Iran, pave the way for future researches. Future research could be conducted on the perceptions about learning organization disciplines in other institutions with the same or different disciplines or samples.

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