



## External Team Learning Activities of the Academic Members of Universities

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### ABSTRACT

Nowadays it is widely believed that performing a team-oriented work is an activity that promotes the practice of human resources management, and the teams are changed to the important cornerstones of organizational effectiveness during last twenty years. Team oriented environments provide opportunities for their employees to learn from their experienced colleagues (internal learning) and learn from opportunities and competitive teams (external learning). One of the results expected of team-oriented work is to motivate collective (team) learning, so that team learning or collective mind is regarded as the indicator of effective working groups. The goal of this study is to determine the external team learning activities of the academic members of universities. The people under study are the academic members of the field of health information technology in the universities of medical sciences of the country. The study tool was translated questionnaire of Barzaman's (2010) team learning activities that was provided for academic members by consensus method and through email. The investigation of validity and reliability of questionnaire inside the country showed that the study tool has appropriate validity and reliability. The results of study that had measured two dimensions of representative and ground external team learning activities showed that the level of external team learning activities among academic members of the field of health information technology is at medium level.

**Keywords:** Gender Selection, PGD, Implantation, Laboratory Embryo

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### INTRODUCTION

The following questions have caused the appearance of research literature about team learning that due to the more than ever emphasis on the importance and role of teams in the working environments are increasingly enhancing. Which factors do cause the effectiveness of working teams, how does the team improve its performance in the repetitive duties, how do the team members learn to work with each other on new duties, and how do they manage the threats that are the requirements of working in the team? [1]

Team learning as an independent issue in the management literature appeared in 1990s AD., and in Peter Senge's book "Learning Organization". Team learning as one of the four other orders proposed in this book enables the organization to learn [2]. It was then that the organizational behavior researchers have developed this theory.

Generally, there are three research processes about team learning that are: 1) Result improvement (by which tune, do the teams improve their efficiency?). The main issue in this domain of research is the profit of experience for the efficiency of teams or organization in various fields. The key findings obtained from this researches collection show that the amount of cooperating experience with each other improves the performance of team. 2) Dominating the duty

(how do the team members coordinate their knowledge and skills to perform duties?). Team learning in this domain is regarded as a result of communication and coordination that team members create common knowledge about the team, duty, resources, and field through this learning. In other word, the teams that their members are aware of what others know (individually or collectively), perform interdependent duties better. 3) Group process (what does the background of the appearance of behaviors and processes create based on learning in the teams?). In this domain team learning instead of team result is regarded as group process. The present study is also located in this domain. In this group of researches the variables have been mentioned that impact on team learning process [3]. For instance: Wong (2004) has investigated about two types of internal and external learning in 73 teams of various organizations and industries, and shows that team coherence promotes external and internal learning behaviors and these behaviors have various impacts on the performance by themselves [4]. Brooks (1994) shows that people's understanding of team climate has a strong relationship with team learning behavior [5]. From the standpoint of other researchers, effective leaders stimulate the need of learning and do not care power differences [6]. The common goals are among the variables that have been studied in the domain of group process. When the teams have goal interdependence, they participate in learning behavior more than the teams that have competitive or independent goals [7]. Another primary condition of learning behaviors in the teams is team identity. The teams that form a common team identity prefer team benefits on personal benefits, accept team general results, and a stronger correlation sense is created among them [8].

Team learning is considered as a team process, particularly the activities that are in the process of team continuously. Team processes are actually the interdependent measures of its members that are performed to organize team working and for achieving collective goal [9]. Team learning process is a repetitive cycle of contemplation in order to obtain insight and action to create change [10]. The process through which the group creates knowledge for its members, itself as system, and others, and thought and action have pivotal role in it [11]. Team learning as a process includes the

activities of acquiring, sharing, modifying or combining the knowledge related to the duty through experience and interaction with another person and as a result, it is the created changes in the people's obvious or hidden knowledge [12]. Kays and Burnett have offered a conceptual model composed of input indicators, processes, and outputs at team level through combining experimental learning theories, interpersonal learning, and social learning. The team goal and the experience of members that have the highest relationship with learning and change are regarded as team inputs. Team processes are located at two categories: 1-Common beliefs about duty and interpersonal interactions such as trust, 2-Team learning behaviors including the behaviors related to acquiring and processing knowledge in the teams. Performance, satisfaction, critical thinking, and knowledge creation are team outputs. They emphasize that learning includes interaction among team members, interaction with people outside the team and with the environment; and through empowering teams to create knowledge and corresponding with changing environments, they improve the performance of team, and help the effectiveness of organization or greater field in which the team is located [13].

One of the important processes of team is to talk. Creation of a common concept of the issue begins with stating personal meaning. It means that every team members by describing the status of issue and how to face with that status, states the meaning and concept and transfers it to his/her teammates. The team members correct, strengthen, and improve the main or primary suggestions through various methods, to create or made a common knowledge. Ultimately, trying to combine disagreements in interpreting the issue and reaching an agreement through talking and negotiation resulted from diversity, and open communication is the facilitator of team learning. Mental safety (risk taking and stating our beliefs, viewpoints, and information with others without fear of losing the status or humiliation), duty coherence (common commitment for achieving common goal), interdependency (continuity of team duties with each other and dependency in the goals, feedback, or reward), and group ability (a common belief that team will be effective in performing numerous duties and various fields), are the beliefs that include interpersonal background about relationship and interactions

among team members, and help team members to understand their duty and environment equally and similarly, and also the impact on team effectiveness [14].

Information exchange and dissemination in team is performed at two levels: 1) Dissemination from individual to collective level occurs when identifying the information related to learning is exchanged by one person with the team, 2) Dissemination at collective level occurs when the information related to learning is exchanged because of team processes, discussions, and measures. Thus, none of the team members can determine that information alone, but this is performed as a result of activity and action at group level. Each one of the team members enters the team with his/her individual visions and recognition, but what makes the team aware and leads its path is the collective knowledge structure at team level. For the occurrence of learning at collective level, the dissemination of new knowledge among team members is very important. The participation and involvement of an individual in the learning process is not adequate, but learning should be transferred to the team level.

The teams, which actively deliberate about their learning processes, created norms and habits, how to learn various status, performing new duties, and the point that how adopt their habits, daily affairs, and unconscious measures, wherever necessary, and the development of common subjective models of themselves and others in connection with team strategies and interactions and group operational processes to access a common collective recognition, perform how to learn learning or the so-called meta-cognition at a high level; and meta-cognition impacts on team learning and team effectiveness [15].

The majority of researches about team learning have been concentrated on internal team learning [14, 16-20]. Internal team learning activities include: questioning, seeking feedback, sharing information and experiences, talking about mistakes, and other activities that permit the team to learn from team members' experiences [21]. Some studies have shown that there is a positive and significant relationship between internal team learning activities and team performance [4, 16, 22]. There is a difference between internal team learning activities and external team learning

activities [4]. External team learning activities are divided into two representative and ground groups of activities. The representative learning activities allow the teams to learn from other people with similar experiences about key aspects or work processes. The ground learning activities allow the team to learn about key and ground aspects of the sources outside the team. Thus, the external team learning activities can provide more opportunities for learning compared with internal learning activities for team members about their work. Moreover, they help the team to endure in the competitive climate [23]. But these activities have been considered less at team level. In addition, the vital institution of the development of every nation is the university, and the determinant roles in this vital institution are academic members. Thus, in this study we investigated the external team learning activities among academic members of the universities. So, the research goals are:

- a) Determining representative external team learning activities of academic members of the field of health information technology in the universities of medical sciences of the whole country,
- b) Determining ground external team learning activities of academic members of the field of health information technology in the universities of medical sciences of the whole country.

## MATERIALS AND METHODS

This study is located in the category of applied descriptive researches. The population under study is all academic members of the universities of medical sciences of the country in the educational year 2016-2017, and the samples are the academic members of the field of health information technology in the universities of medical sciences of the whole country, that due to the low number they are assessed by consensus method. The study tool was translated questionnaire of Barzaman's (2010) team learning activities that was provided for sample members through email. Expert professors confirmed the validity of questionnaire of external team learning activities in two dimensions of representative external team learning activities and ground external team learning activities, and their reliability were obtained 0.78 and 0.86 respectively by Cronbach's alpha. The data, after collection was entered to the SPSS software and was analyzed by descriptive statistics (mean,

frequency, frequency percent, and collective frequency percent) and inferential statistics (Whitney U test).

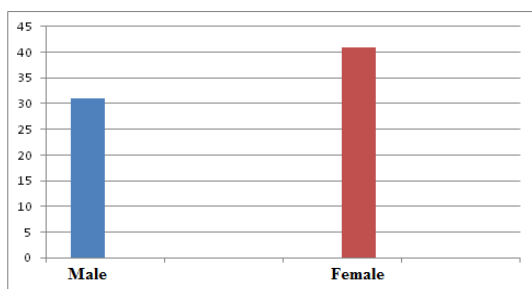
**Results**

*Demographic Data Description*

Considering the first part of the questionnaire related to the characteristics of the responder of questionnaire, in this regard, the descriptive data of 72 participants in the research has been separated as follows:

**Table 1: Descriptive Data According to the Gender of Participants**

Gender	Frequency	Percent	Collective Percent
Male	31	42.5	42.5
Female	41	56.2	100%
Total	72	100%	



**Figure 1: Column Chart Related to Gender**

The present research sample indicates that from 72 people participated in this research, 31 people (42.5%) have been male and 41 people (56.2%) were female. The highest frequency is related to the female participant sample.

**Table 2: Descriptive Data According to the Age of Participants**

Age Range	Frequency	Percent	Collective Percent
Less than 30 years old	16	21.9	21.9
30-40	46	63	84.9
More than 40 years old	10	15.1	100
<b>Total</b>	<b>72</b>	<b>100</b>	

Table 2 shows the age range of participants in the present research. According to the results of the above table from 72 people participated in this research 19 people (equal to 21.9%) have been in the age range of under 30 years old, 46 people (63%) in the age range of 30-40, and 10 people (15.1%) more than 40 years old. The highest

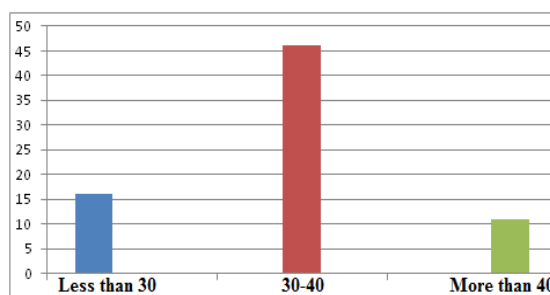
frequency is related to the participant sample of 30-40 age range.

*First Hypothesis: Determining representative learning activities among academic members of the field of health information technology in the universities of medical sciences of the country*

**Table 3: Determining Representative Learning Activities Ratio of the Academic Members of the Department of Health Information Technology**

Representative Learning Activities Ratio	According to percent				
	Very low	Low	Medium	High	Very high
Item 1: Academic members disseminate the collected data for investigation and completion of duties.	5.5	37	37	17	2.8
Item 2: Academic members observe and investigate the work of people outside the team for learning from their experiences.	5.5	32.9	35.6	24.7	1.4
Item 3: Academic members talk about how to prevent previous mistakes with people outside the group.	16.4	46.6	27.4	6.8	2.8

Table 3 shows representative learning activities ratio of the academic members of the department of health information technology. According to the above result, 56.8 percent of academic members disseminate collected data for investigation and completing the duties, 61.7 percent of academic members observe and investigate the work of people outside the team for learning from their experiences, 37 percent of academic members talk about how to prevent previous mistakes with people outside the group. In order to see if the observed results between two male and female genders have significant difference or not, the Whitney U test was also used.



**Figure 2: Column Chart Related to Age**

**Table 4: Ranking of Representative Learning Activities Ratio of the Academic Members of the Department of Health Information Technology According to Gender**

	Gender	Number	Ranks	
			Mean	Total Ranks
Item 1: Academic members disseminate the collected data for investigation and completion of duties.	Female	41	37.93	1517
	Male	31	33.52	1039
	Total	72		
Item 2: Academic members observe and investigate the work of people outside the team for learning from their experiences.	Female	41	40.35	1654.50
	Male	31	31.40	973.50
	Total	72		
Item 3: Academic members talk about how to prevent previous mistakes with people outside the group.	Female	41	38.28	1531
	Male	31	33.06	1025
	Total	72		

Table 4 shows the rank of representative learning activities ratio of the academic members of the department of health information technology according to gender. According to the above table, the scores mean of women in all three mentioned items are higher than the men’s scores mean. In order to investigate the point that if the observed scores means in each group are significant or not, the Whitney U test was used.

**Table 5: Whitney U Test for Investigating the Difference of Men and Women’s Scores in the Representative Learning Activities Component**

	Item 4	Item 5	Item 6
Whitney U Test	543	477.500	529
Wilcoxon Test	1039	973.500-	1025
Z Score	-0.95	-1.88	-1.13
Significance Level	0.342	0.059	0.256

Table 5 shows the results of Whitney U test for investigating the difference of men and women’s scores in the representative learning activities component. According to the above results the difference of men and women’s scores in item 4 (sig=0.34), item 5 (sig=0.059), and item 6 (sig=0.25) are not significant (P<0.05). In other word, although the mean of women’s rank in the items 4, 5, and 6 is higher than men, this difference is not statistically significant.

*Second Hypothesis: Determining ground learning activities among academic members of the department of health information technology in the universities of medical sciences of the country*

**Table 6: Determining Ground Learning Activities Ratio of Academic Members of the Field of Health Information Technology**

Ground Learning Activities Ratio	According to percent				
	Very low	Low	Medium	High	Very high
Item 4: Academic members are seeking competitor universities and departments that are performing similar projects.	6.8	30.1	26	23.3	13.7
Item 5: Academic members investigate the environment outside university to discover ideas and experiences.	30.1	17.8	31.5	20.5	0
Item 6: Academic members collect the information of people outside the group.	31.5	13.7	41.1	13.7	0

Table 6 shows ground learning activities ratio of the academic members of the department of health information technology. According to the above result, 63 percent of academic members are seeking competitor universities and departments that are performing similar projects, 52 percent of academic members investigate the environment outside university to discover ideas and experiences, and 31.5 percent of academic members collect the information of people outside the group. In order to see if the observed results between the two male and female genders have significant difference or not, the Whitney U test was also used.

Table 7 shows the ranking of ground learning activities ratio of the academic members of the department of health information technology according to gender. According to the results of above table the mean scores of women in all three mentioned items are higher than the men’s scores mean. In order to investigate the point that if the observed scores means in each group are



significant or not, the Whitney U test was also used.

**Table 7: Ranking of Ground Learning Activities Ratio of the Academic Members of the Department of Health Information Technology According to Gender**

	Gender	Number	Ranks Mean	Total Ranks
Item 4: Academic members are seeking competitor universities and departments that are performing similar projects.	Female	41	37.84	1513.50
	Male	31	33.63	1042.50
	Total	72		
Item 5: Academic members investigate the environment outside university to discover ideas and experiences.	Female	41	39.68	1627
	Male	31	32.29	1001
	Total	72		
Item 6: Academic members collect the information of people outside the group.	Female	41	40.85	1675
	Male	31	30.74	953
	Total	72		

**Table 8: Whitney U Test for Investigating the Difference of Men and Women's Scores in the Ground Learning Activities Component**

	Item 7	Item 8	Item 9
Whitney U Test	546.500	505	457
Wilcoxon Test	1042.500	1001	953
Z Score	-0.880	-1.543	-2.15
Significance Level	0.379	0.123	0.031

Table 8 shows the results of Whitney U test for investigating the difference of men and women's scores in the ground learning activities component. According to the above results the difference of men and women's scores in item 9 (sig=0.03) are significant (P<0.05), but in item 7 (sig=0.37), and item 8 (sig=0.123) are not significant (P>0.05). In other word, the rank mean of women in item 9 is higher than men, and this difference is statistically significant.

**DISCUSSION AND CONCLUSION**

The results of this study show that the level of external team learning activities among academic members of the field of health information technology in the universities of medical sciences of the whole country is at medium limit. The majority of people report unpleasant experiences of team working and membership in the teams that are in most cases due to the unfamiliarity with the skill of team working. The weak interpersonal skills, not accepting the responsibility of some members, problems

occurred about decision-making, evading to perform the duties, etc. are among the factors that make people elusive to perform team working. These issues can be stated in the form of events such as group thinking, distribution of responsibility, disengagement, social laziness and conflict that create problems when performing the work and will prevent performing successful and effective team learning.

When team members regardless of various viewpoints and opinions show themselves in favor with the majority, group thinking happens; the phenomenon that causes stagnation and immobility in the team. When people become the member of teams, they imagine that other people who are in the group perform the works. This phenomenon is called responsibility distribution that can outbreak the social wasting time and disengagement as well. The social wasting time and disengagement cause some of the team members, compared with the time they worked individually, work less or do not work at all, and however benefit from the results of others. Conflict is the inevitable aspect of team working that is resulted from the opinions differences and disagreements of team members, and hence disagreement in the team. Of course conflict is not always destructive for the teams, and depends on the conflict type, and how to manage and face with it [24].

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