Relation between team motivation, enjoyment, and cooperation and learning results in learning area based on team-based learning among students of Tehran University of medical science

Amir Hossein Mohammad-Davoudi, Ashrafosadat Parpoochi

Abstract

This study has aimed to investigate the effect of relation among team motivation, team enjoyment, and team cooperation on learning results in team-based learning environments among students of Tehran University of medical science. This study was applied in purpose and was descriptive based on correlation in gathering data and performing. All students of Tehran University of medical science from 2011 to now were considered as statistical community and a sample with 326 subjects were selected by using Morgan table and simple random method. Tools of gathering data were researcher-made questionnaire with 24 questions. Cronbach’s alpha of each variable is 79%, 87%, 78% and 92% respectively. Obtained data was analyzed by Pearson correlation tests and path analysis and using SPSS software. Also, there is positive, significant and considerable relation among variables. Results from path analysis showed that team enjoyment with coefficient of 0.418 has the highest effect on learning results, team cooperation with coefficient of 0.205 has influenced learning results, team cooperation with team enjoyment variable and coefficient of 0.108 has influenced learning results; team cooperation with motivation variable and coefficient of 0.068 has influenced on learning results, team cooperation with team enjoyment and motivation variables has effect on learning results with coefficient of 0.15, motivation with coefficient of 0.197 has effect on learning results and motivation with team variable has increasing effect on learning with coefficient of 0.272. There was no variable which indirectly influences learning results.

Keywords: motivation, enjoyment, cooperation, team learning

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1. Introduction

One of the important components of learning is motivation. Learning must mainly be known as a flow which is lighted by an interest and motivation torch and becomes permanent. Motivation is a process during which purpose-based activity is encouraged and maintained (Najmi, 2009). Team enjoyment is considered as emotional variable and important concept in learning because it can describe attract logy of educational matters to students. According to Agravel & Karahanna (2000), attract logy can be defined as the state of deep involvement in class which influence interaction and behavioral purposes. Mohammad Davoudi & Hojati (2013) believes that cooperation is the philosophy of interaction and life style in which students are responsible for their works including learning. In learning, the purpose is not knowledge, but the aim is to educate (upbringing) students who can interact with each other cleverly. Team cooperation is a set of actions increasing the responsibility and influence of student in decision making through delegation of authority and causing member to feel possession and belonging to team. Team-based learning is the comprehensively educational framework, team-based and comprehensive–based which has first been proposed by Michelsen (1970) to facilitate active learning in big classes. Team-based learning means “learning from mistakes and improving knowledge and skills and creating new solutions to solve problems so that work method and performance are improved” (Schipper et al, 2013). Team-based learning is not only the teaching technique but also a special educational approach designed and proposed to 1) support the development of learning teams with high performance in order to benefit from special capacities of such teams, 2) to provide opportunities for teams to participate in meaningful learning tasks (Michelsen et al, 2002). Such teams have two main characteristics offering main advantages to an educational environment: 1) team members are committed and effort completely in the team, 2) learning teams cope with solving problems which cannot be solved by the most talent member.

Up to now, many researches on relation between motivation and learning result, relation between cooperation and learning result, difference traditional learning and cooperative one have been carried out. But internal research has not investigated three variables including team motivation, team enjoyment and team cooperation on learning result in team-based learning. Some studies have investigated the relation between motivation and learning result (Khodashenas et al, 2013). For example, in a study titled “effect of motivation on learning second language”, it is concluded that having motivation plays important role in all aspects of learning second language. Nohi et al (2012) also, have found this result. In a study named “motivation of university students of medicine in doing their works and learning result”, Kasacar (2012) found that motivation and increase in it lead to better learning and performance. In a research titled “effect of active learning on enjoyment of student” carried out by Gooch (2011), it was determined that active learning including learning through cooperation influences enjoyment of student. In a study titled “interaction of student with science in beginning of adolescence: the enjoyment contribution to and interest of student in learning science” done by Marry (2011), it became clear that there is relation between enjoyment of student to learn science and their interest in it Parpouchi (2014). Also, Keramati et al (2011) obtained same results. In a research titled “effect of cooperative learning on learning results of Azad university students in Kermanshah (Iran) “ carried out by Motaei (2014), the results showed that there was significant difference among groups and learning groups performed better than traditional group through cooperation. In a study called “cooperative learning and its effects on success of scientific level of students of basic engineering” done by Adolph & Prieto (2011), results showed that cooperative learning influence learning result in basic engineering courses. In their research, Zaki Bairam (2013) and Suhendan et al (2014) found that cooperation of students influences generating motivation. In their evidences, Alghamdi & Gillies (2013) found that cooperation of students influences enjoying learning.

In this study, statistical community included students of Tehran University of medical science from 2011 that they were 2172 students. Sampling method was simple random. A sample exceeding 326 subjects of the community have been referred on the basis of Morgan table. The main tool of gathering data was researcher-made questionnaire. After collecting questionnaire and investigating views of experts, information bank was formed for 30 questionnaire and reliability of indices were evaluated. Although different questioners were used to compile this questionnaire, views of experts were used for its content validity and its content validity was confirmed by five experts in research domain. For each of concepts, reliability coefficient of all obtained ranges was high. Cronbach’s alpha of each variable was 79%, 87%, 78%, and 92% respectively. This shows internal correlation between variables to evaluate
desired concept. According to definitions and researches carried out, following conceptual pattern is investigated to assess relation between motivation, enjoyment and cooperation of team and learning results.

![Fig. 1. conceptual model of the study](image)

According to conceptual model of the study, following hypotheses are considered:
1) There is relation between team cooperation and individual motivation
2) There is relation between team cooperation and individual enjoyment of team members
3) There is relation team cooperation and learning results of university students
4) There is relation between motivation of team members and learning results of university students
5) There is relation between enjoyment of team members and learning results of university students
6) There is relation between motivation of team members and enjoyment of team members

2. Findings

The Kolmogorov–Smirnov test was used to investigate the normality of distributing the data of variables, the study variables distributed normally. Pearson correlation test has been used to test secondary hypotheses. According to results in table 1, there is significant correlation among all secondary hypotheses of the study. It can be said that there is positive and significant correlation between variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Team cooperation</th>
<th>Team motivation</th>
<th>Team enjoyment</th>
<th>Learning results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team cooperation</td>
<td>1</td>
<td>0.549**</td>
<td>0.520**</td>
<td>0.530**</td>
</tr>
<tr>
<td>Team motivation</td>
<td>1</td>
<td>0.741**</td>
<td>0.619**</td>
<td></td>
</tr>
<tr>
<td>Team enjoyment</td>
<td>1</td>
<td></td>
<td>0.671**</td>
<td></td>
</tr>
<tr>
<td>Learning results</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** = Significant level in 0.01

Path analysis has been used to test the main hypothesis. To do path analysis, learning results were defined as dependent (criterion) variable and variables of team motivation, enjoyment and cooperation were defined as
independent (predictor) variables to regression program and multivariable regression has been used (by Enter method). Results obtained for main hypothesis have been summarized in Table 2 and Figure 2 by using path analysis and explanation of path coefficient. Results of path analysis showed that team enjoyment has the highest effect on learning results with coefficient of 0.418, team cooperation with 0.205 coefficient has influenced learning results, team cooperation with team enjoyment variable and coefficient of 0.108 has influenced learning results; team cooperation with motivation variable and coefficient of 0.068 has influenced on learning results, team cooperation with team enjoyment and motivation variables has effect on learning results with coefficient of 0.15, motivation with coefficient of 0.197 has effect on learning results and motivation with team variable has increasing effect on learning with coefficient of 0.272. There was no variable which indirectly influences learning.

![Path Analysis Model](image)

**Figure 2. Path analysis model**

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Criterion variable</th>
<th>Direct effect</th>
<th>Indirect effect</th>
<th>Total effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team cooperation</td>
<td>Learning results</td>
<td>0.205</td>
<td>0.652×0.418×0.15×0.549</td>
<td>0.355</td>
</tr>
<tr>
<td>Team motivation</td>
<td>Learning results</td>
<td>0.197</td>
<td>0.652×0.418×0.272</td>
<td>0.469</td>
</tr>
<tr>
<td>Team enjoyment</td>
<td>Learning results</td>
<td></td>
<td></td>
<td>0.418</td>
</tr>
</tbody>
</table>

3. Conclusion and discussion

According to the first sub-hypothesis based on relation between team cooperation and individual motivation of members, several researches including researches carried out by Zaki Bairam (2013) and Suhendan et al. (2014), have shown the effect of cooperation method on motivation of educational progress. According to obtained results, cooperation influences motivation of university students. Also, cooperative learning method influences motivation of university students due to using team work and mutual cooperation among learners. However, it can be concluded that team motivation is increased by increasing team cooperation and when team motivation increases, learning results increase. The reason of corresponding this study with previous ones can be due to the nature and contents of variables. According to second sub-hypothesis based on relation between team cooperation and individual enjoyment of members, several studies including studies carried out by Alghamdi & Gillies (2013), have shown the effect of cooperation method on team enjoyment. According to obtained results, learning leads to increase in self-esteem through cooperation and university students are satisfied with learning results by increasing the motivation and this satisfaction causes them to enjoy learning. However, it can be concluded that team enjoyment is increased by increasing team cooperation and when team enjoyment increases, learning results increase. The reason of corresponding this study with previous ones can be due to the nature and contents of variables. According to third sub-hypothesis based on relation between team cooperation and learning results, several researches including...
researches done by Motaei (2014) and Keramati et al (2011) and Adolfph & Prieto (2011) have indicated that cooperation influences learning results. According to obtained results, cooperation learning has significant effect on knowledge, understanding, using scientific information, and power of analyzing scientific information of university students. They understand and learn lessons better and they have opportunity to involve in learning and their learning becomes deep. However, it can be concluded that learning results are increased by increasing team cooperation. The reason of corresponding this study with previous ones can be due to the nature and contents of variables and sampling method. According to fourth subhypothesis based on relation between individual motivation and learning results, several studies such as studies done by Khodashenas et al (2013), Nohi et al (2012), and Kasacar (2012), have shown the effect of team motivation on learning results. According to obtained results, having motivation is considered as the key factor of learning. Internal motivation is significantly affected by sex, age, and educational field. Internal motivation is more effective than external one and can be increased by giving independence to university students and emotional support. However, it can be concluded that if motivation of students in teams increases, their learning result will be increased. The reason of corresponding this study with previous ones can be due to the nature and contents of variables, measurement tools, and statistical community. According to fifth sub-hypothesis based on relation between individual enjoyment of members and learning results, most of studies like as studies done by Gooch (2011), Marry (2011) have shown the effect on team enjoyment on learning results. According to results from the study, factors such as competition, support, acquiring high score, and considering important the student by professor increase the motivation. When student has enough motivation to learn tutorial matter, he/she enjoys it. Active learning causes student to enjoy learning, learning enjoy is increased by interest and considering important the knowledge. Generally, learning enjoyment leads to improve learning results. However, it can be concluded that team enjoyment has the highest effect on learning results. The more the team learning, the more the learning results. The reason of corresponding this study with previous ones can be due to the nature and contents of variables. According to sixth sub-hypothesis based on relation between individual motivation of members and individual enjoyment, several researches have shown the effect of team motivation method on team enjoyment. According to results from the study, learning enjoyment has influenced learning results and has increased learning motivation. In most of students, learning enjoyment, also, leads to improve learning and influences their motivation. It can, however, be said that team enjoyment is increased by increasing motivation and when team enjoyment increases, learning results is increased. The reason of corresponding this study with previous ones can be due to the nature and contents of variables. Following inevitable necessity of institutionalizing team learning among people which is proportional to today’s variable needs, this study provides necessary opportunities to convert learning to systematic and effective method to use small groups by knowing factors causing the development of team learning. According to obtained results, in this research, university students have positive view and attitude to performing team-based learning. This type of learning (team-based learning) can be said to help them know their weak and strong points by developing self-awareness and if people have enough knowledge about their ability, they can better cooperate with each other in educational issue and be successful to communicate effectively. Also, it can help them know the position increasing the motivation. factors and limitations presented in this study has attracted the attention of high authority of universities and honorable professors in different educational level and has given them methods and strategies which are brief to be approach in this way and motivation for serious attention to this issue. Meanwhile, educational issue must be controlled by authorities because students and professors must use team-based learning as one of new educational methods to increase communicational skills among people and know new educational methods.

References

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