



## Evaluation of Problem-based Learning Method for Teaching Islamic Education Courses to Students of Shiraz University of Medical Sciences

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### Abstract

Emphasis on teaching religious education in the university and raising the level of religious awareness of students in parallel with specialized education, raises attention to the important point that the set of Islamic education courses was in line with the demands and desires of students? The aim of this study is to an increase of the analytic mood among the students and faculty members of the department of Islamic education by the teaching method of Problem-based learning. The present study was performed cross-sectionally on students of Shiraz University of Medical Sciences in Islamic education courses that they had taken as a general course. One of the strengths of this method is the student-centered and process-oriented instead of text-centric and moving from central memorization to research-oriented.

**Keywords:** Islamic Education, Problem-based learning method, Shiraz Medical University

### A. Introduction

In Iranian universities and for all academic fields, taking Islamic education courses is mandatory. We decided to use new teaching methods in offering Islamic education courses, which have been held as one-way lectures for many years. The inclusion of Islamic education courses in the curriculum and educational content of Iranian universities helps to build faithful and committed people; because the growth and ascendancy or corruption of

a society depend on the university (Majidi & Fatehi, 2007). On the other hand, training value-based professionals according to Islamic teachings can be the key to solving the riddle of inadequate and unrelated teachings and also to reduce the distance between the modern world and the Islamic society, which is an important task for the professors of Islamic education in universities. It should not be overlooked that the courses that explain the theoretical foundations and structural framework of Islamic beliefs in universities, in terms of method and content need to be evaluated, strengthened and constantly reviewed (Firoozi, 2015). Four decades after the victory of the Islamic Revolution of Iran, it is appropriate to formulate a comprehensive plan to set and determine the major goals of Islamic education courses in universities so that a useful step can be taken to optimize the ethics and behavior of students. Also, by compiling appropriate topics and educational content, it achieved its basic goals, and finally, the necessary skills and training should be given to teachers to improve their teaching methods on this basis (Firouzi, 2014). Evaluating the teaching method in order to understand the extent of transmission and impact of educational concepts to students is very important. In particular, teaching Islamic education courses in universities should raise the level of beliefs and religious commitment of students in parallel with their scientific development in the university environment.

In this research, we want to use the Problem-based learning method to better teach Islamic education courses. Problem-Based Learning (PBL) is a teaching method in which complex real-world problems are used as the tool to promote student learning of concepts and principles as opposed to direct presentation of facts and concepts. In addition to course content, PBL can promote the development of critical thinking skills, problem-solving abilities, and communication skills. It can also provide opportunities for working in groups, finding and evaluating research materials, and life-long learning (Duch, Groh, & Allen, 2001).

The PBL process does not focus on problem solving with a defined solution, but it allows for the development of other desirable skills and attributes. This includes knowledge acquisition, enhanced group collaboration and communication. In this method, which is student-centered and learners using the discussion method, actively participate in educational activities (Carson, 2007).

Problem-based learning increases students' ability to transfer knowledge to new issues and achieve a more coherent perception (Hmelo, 1998). The quality of the issue is the basis of the success of a learning project. The issue must be challenging in order for conflict to arise and motivation to resolve the problem. In problem design, a correct image of the knowledge that the student sees and solves the problem must be created. This learning is a social process for solving real world problems (Downing, 2009).

Findings of the present article, while emphasizing most of the previous findings, show that the problems of Islamic education departments in terms of teaching methods, as the most important dimension of professional competencies of professors, need to be reviewed and the need to compile a comprehensive document of Islamic education

courses in a cognitive structure. And metacognition is an undeniable necessity for improving the efficiency of Islamic education courses. For this purpose, the present study, with regard to new approaches to the needs of students in determining educational approaches, has done a theoretical analysis of students, which confirms the main hypothesis of the article.

The main question of this research can be summarized as follows:

Whether the students of Shiraz University of Medical Sciences are satisfied with Learning environment after use the problem-based learning method in Islamic education courses?

And specific questions also include:

1. Is there a difference between male and female students in terms of student perception of learning?
2. Is there a difference between male and female students in terms of student's perception of teachers?
3. Is there a difference between male and female students in terms of student's academic self- perception?
4. Is there a difference between male and female students in terms of student perception of the educational atmosphere?
5. Is there a difference between male and female students in terms of student's social self- perception?
6. Is there a difference between male and female students in terms of the total score of the perception of atmosphere?

## **B. Literature Review**

Much field research has been done on the pathology of teaching methods of Islamic education courses. Alavi (1990) has shown that holding workshops to teach new teaching methods to professors of Islamic education departments in universities plays an important role in promoting professors and students. Louyeh (2007) has shown that Islamic education courses face the scientific and behavioral weakness of Islamic education professors, inappropriate content and, most importantly, the use of inefficient teaching methods. Liaghatdar et al. (2008) in their research have shown that the level of students' satisfaction with the content of Islamic education books and also the teaching methods of Islamic education professors from the perspective of the researched students is less than expected. The need to pay attention to metacognitive skills as one of the indicators of the higher education system and the extent to which Islamic education courses achieve these goals from the perspective of these researchers has been relatively optimistic. Amini, Rahimi, & Samadian (2013) have shown in their findings that a set of internal and external factors have had a negative impact on Islamic education courses, which are: the scientific ability of the teacher, the use of new teaching methods and evaluation.

Some of these researches in the form of doctoral dissertations have analyzed the situation of Islamic education courses and their instructors in a more comprehensive way. Presenting a suitable model is one of the most important methodical efforts in this field (Khoshi, 2013). Khoshi, Maleki, & Kalantari (2012) showed that one of the important gaps

in the curriculum of Islamic education courses in universities with a history of nearly three decades of activity of Islamic education departments, as the first step is research, design and explanation of the desired objectives of these courses which is agreed upon by experts and students, according to the current needs of society. Firoozy et al. (2014) in a study to evaluate the effectiveness of the application of constructive problem-based learning design model in in-service training of teachers. The results of this study showed that the use of constructive problem-based learning design model in in-service training of teachers increases the effectiveness of these training courses. In another study, Kushk & Ebrahimi (2013) designed, implemented, and evaluated web-based continuing education based on problem-based learning theory at Mashhad University of Medical Sciences. The results of this study also showed the effectiveness of education due to the application of the central problem model in medical education. Staun, Bergström, & Wadensten (2010) in a study examined the perception of nursing staff and students and their satisfaction with education with problem-based learning method. The results showed that students and staff were satisfied with this method. Reynolds & Hancock (2010) also studied the effectiveness of problem-based learning method in comparison with the lecture method in the environmental technology course. The results of his research showed an increase in satisfaction, attitude and learning of trained learners using the problem-based learning method compared to the lecture method.

In the presented researches, Alavi (1990), Amini et al. (2013), Louyeh (2007), and Liaghatdar et al. (2008) all of them have pointed out that a new teaching method should replace the traditional teaching method of lecturing in teaching education courses, but none of them has mentioned the alternative teaching method. Also, Khoshi et al. (2012), Firoozy et al. (2014), Kushk & Ebrahimi (2013), Staun et al. (2010), and Reynolds & Hancock (2010), all of them have mentioned problem-based method teaching as one of the good teaching methods, but all of them have studied this method in different fields except Islamic education courses. Therefore, our hypothesis here is that problem-based method of teaching is one of the best methods for teaching Islamic education courses in universities.

### **C. Research Methodology**

Evaluation has been done to determine the satisfaction of students of Shiraz University of Medical Sciences from the problem-based learning method in Islamic education courses. Subjects participated in the study by cluster sampling method in which the class was selected as the cluster. The condition for the subjects to enter the research was that: 1) students of Shiraz University of Medical Sciences 2) be present in the class on the day of the research. Taking into account the above criteria, 232 students participated in the study, with an average age of  $20/41 \pm 1$ . Among the participants, 19% were boys and 79% were girls.

There are different methodologies for studying and evaluating the educational environment, both qualitatively and quantitatively, among which DREEE (Dundee Ready

Education Environment Measure) DREEM is designed specifically for educational environments experienced by medical and health science students (Langroudi, Badsar, Hosseini, & Rouhi, 2012). The questionnaire was developed by Roff et al. (1997) through an international Delphi panel at the University of Dundee in Scotland (Meshki, Dehnoo, & Shareinia, 2016; Whittle, Whelan, & Murdoch-Eaton, 2007). This tool is used to diagnose curriculum problems and the effectiveness of change in education, as well as to identify the difference between the real environment and the desired environment, which can provide valuable information to managers (Roff et al., 1997). This questionnaire in several institutions with different objectives such as comparing faculties with each other (Varma, Tiyyagi, & Gupta, 2005), comparing successful and less successful students (Roff, McAleer, Ifere, & Bhattacharya, 2001), assessing students' perception of the ideal educational environment (Mayya & Roff, 2004), examining the expected and desired educational environment against the educational environment Realistic (Till, 2005), and finally used as a tool to improve the educational environment (Roff et al., 2001). Given the advantages mentioned above, if we can identify the active elements in the educational environment of a higher education institution and them as understood by students or teachers, we have both a basis for modifying them to enhance the learning experience and facilitate informed policy-making based on the correct knowledge and allocation of organizational strategic resources (Miles & Leinster, 2007; Holdford & Reinders, 2003). Reinders for this purpose, this study was conducted to evaluate the learning and educational environment in Shiraz University of Medical Sciences after using the problem-based educational method using the DREEM questionnaire.

In the test subscales of all subjects to the research tool in two parts (1) Demographic questionnaire to assess age and gender (2) DREEM questionnaire in 50 questions in the Likert scale 5 parts (strongly agree to strongly disagree) five factors it assesses the involvement in the educational process from the students' point of view these dimensions include 1) Students' Perception of Learning 2) Students' Perception of Teachers 3) Students' Academic Self-Perceptions 4) Students' Perception of Atmosphere and 5) Students' Social Self-Perceptions.

Depending on the number of questions in each dimension, the maximum number of questions that can be calculated in each dimension is different. In the first dimension 12 questions and a maximum score of 48; in the second dimension 11 questions with a maximum score of 44; in the third dimension 8 questions with a maximum score of 32; in the fourth dimension with 12 questions and a maximum score of 48; have been. Finally, the score calculated in each dimension is divided into separate categories according to the score, which is mentioned in the results section. In one study, the alpha coefficient of the questionnaire was equal to 0.75. It has been reported that it indicates the acceptable internal consistency of the questionnaire and finally its validity has been confirmed by the same researchers. The raw information and data collected have been analyzed using SPSS Editor 22 software.

**D. Findings**

The present study was performed on 232 students of Shiraz University of Medical Sciences, with an average age of  $20/41 \pm 1$ . Among the participants, 19% were boys and 79% were girls. Based on demographic findings, the most age group participating in the study was the age group of 18-22 years (60%). Also, the study sample was selected from 9 different fields of study, the highest number was related to medicine (28%) and the lowest was related to pharmacy.

According to the research design, descriptive methods (mean standard deviation and percentage) have been used. In terms of perception of learning in the evaluation of students of Shiraz University of Medical Sciences, 66.83% believe that teaching has led to thinking. In terms of scientific self-perception: 100% are confident, in terms of perception of atmosphere 69.68% feel good in general and in Social self-perception 65.85% of students believe that the environment is very good. The overall score of the questionnaire was classified into four groups: unfavorable or very poor (zero to 50), semi-desirable or problematic (51 to 100), desirable or more positive (101 to 150) and very desirable or excellent (151 to 200). Table 1 presents the mean and standard deviation of the dimensions of the DREEM questionnaire and its total score.

Table: 1 Maximum score, average perception scores, standard deviation and percentage of score obtained in the five areas of learning and teaching environment and general learning environment

Dimensions of educational environment	Maximum Score	Minimum Score	Overall average perception $\pm$ standard deviation	Percentage of score earned
Student's perception of learning (SPOL)	48	3	32.42 $\pm$ 7.80	66.83
Student's perception of teachers (SPOT)	44	14	35.14 $\pm$ 6.61	79.27
Student's academic self-perception	32	2	20.08 $\pm$ 5.70	100
Student's perception of atmosphere (SPOA)	48	11	33.79 $\pm$ 7.17	69.68
Student's social self-perception (SSSP)	28	1	18.65 $\pm$ 4.68	65.85
General learning environment	199	36	137.46 $\pm$ 30.12	67.78

According to the general score of education (137.46), the results indicate the desired satisfaction and positive attitude of students towards the use of problem-based learning method in Islamic education courses. The results of the research in the five

dimensions of the questionnaire indicate that students have high satisfaction with the different dimensions related to the teaching of Islamic education courses with the problem-based learning method. To find out whether there is a significant difference between the scores of the two groups of girls and boys in the five dimensions and the total score or not, the t-test of two independent groups was used, the results of which are reported in Table 2.

Table: 2 Independent t-test to evaluate the difference between the scores of men and women in the dimensions and total score of the DREEM questionnaire

Dimensions of educational environment	F	Measure t	Significance level (two domains)	Mean difference	Standard error difference	confidence level 95%	
						Low limit	Up limit
Student's perception of learning (SPOL)	1.85	-1.319	0.188	-0.096	0.72	-2.39	0.46
Student's perception of teachers (SPOT)	0.19	-2.71	0.007	-1.60	0.61	-2.85	-0.45
Student's academic self-perception	5.25	0.319	0.750	0.15	0.48	-0.80	1.11
Student's perception of atmosphere (SPOA)	5.33	-3.44	0.001	-2.10	0.61	-3.31	-0.90
Student's social self-perception (SSSP)	6.19	-1.60	0.111	-0.64	0.40	-1.42	0.14
General learning environment	0.39	-3.80	0.000	-10.30	2.64	-15.22	-4.85

The results obtained from the data showed that the mean scores in the two dimensions of student perception of professors (sig = 0.007) student perception of educational atmosphere (sig = 0.001) and the total score of educational atmosphere (sig = 0.000) was significantly higher among men than women. Also, no significant difference was found between the scores of men and women in other dimensions.

## **E. Discussion**

In the beginning the teacher groups taught the generalities of this method through fourteen primary sessions, followed by complementary workshops. Then, this method was

conducted by the faculty members at the classes of the Islamic Sciences at Shiraz Medical university as follows:

1. In the first session, we present the necessity and the way of presenting this applicable and practical method. In this method, no source is presented as the textbook by the master in the beginning, and the master and through presenting the generalities of the course, will ask the students to give their questions and mental doubts in the first session or at most the second one (through brain storming), and fill them in the forms which have been prepared earlier. In this section, the master can pose some questions as guidance, and in the process the needs will be detected and prioritized.
2. The master will define these questions within the framework of main chapters, and after grouping the students in the second week, will assign each of the main chapters to a group, and will present the available and authentic sources , encouraging the students to conduct research ; in addition he will assign hours during the week for consultations so that the students will be in contact with the master, and work out their problems so that they will present the results of their research to the other students on the day of the conference. In this project, the master should tell all the students that prior to attending the class, they should have a pre-study on the subject.
3. In this method of teaching, the students should always be evaluated, and some advantages /privileges be considered for them.
4. As the evaluation is done on a regular basis, therefore it is required that the students attend the class from the beginning.
5. In this method, asking questions is the cornerstone of teaching. Now, whenever the question is a common one, we put it on the board, and we will ask the students either a written or oral response, and then we will write down the responses, listing the pros and cons of each one in front of the students so that the students will be convinced which response was less harmful and which more problematic.
6. In this very method, we can ask the students who have responded to the questions (whether for or against), to elaborate on their ideas for the students, for the questions to be fully developed. In this method, the master will only monitor the process of answering, and not interfering, and then will complement the questions and present the correct idea.
7. If the master wishes to ask the students question, he should ask the whole class, he should listen carefully to the responses, and he should give the students the opportunity to think and present the right responses.
8. Time or the assignment of time while answering is vital. The deep questions should be answered with more precision and time, while those easier and more shallow ones with less time. At times, the students' questions are deviant. The master should be careful.

9. Using modern educational facilities such as films, slides, PowerPoint etc. can be very helpful in this method. When teaching is finished, as so called by technical question or a fundamental one can be posed, and the students be asked to think about it, and present their responses in the written form in the next teaching session.
10. The above activity is both an assignment, and can have an advantage/privilege, enhancing the process of studying the sources and finding out the answers. Meanwhile we tell the students the more the references cited in the answers, the higher their advantages/privileges.
11. Towards the end of the term we will ask all the groups to announce their feedback, criticism and ideas regarding one term of the need-oriented teaching, telling us its shortcomings and advantages, offering strategies to enhance and better the method.
12. Finally, in this method the base should be that all techniques whether in form or content are to be applied. For instance, at the end of each session the master can use the technique of lecturing to wrap up and answer the questions of which the students were not able to answer properly, or that the students be asked to use the audio-visual technique to present the course. Therefore, in this method all the other techniques such as solving the problem, conversation, lecture etc can be included

Since the problem-based learning method is very effective on the quality of students' learning, the present study was conducted to investigate the effect of the problem-based learning method on students' satisfaction with Shiraz University of Medical Sciences from Islamic education courses based on the DREEM questionnaire. In examining the main question of the research, whether the students of Shiraz University of Medical Sciences are satisfied with Learning environment of Islamic education courses? The results showed that the average total score of measuring the educational environment was 137 out of 200, which indicates the positive evaluation of students from the educational environment of Islamic education courses. In a study conducted at the University of Victoria in Australia, the average DREEM score was 135 (Vaughan et al., 2014). In a study by Brown, Williams, & Lynch (2011), conducted on 548 medical and paramedical students, the mean score was 137.3 out of 200. Another study in the UK averaged 124 points (Fidelma, McAleer, & Roff, 2006). In a study conducted by Varma et al. In Birmingham, England, the average score was 139 (Varma et al., 2005). In examining the first question of the research, is there a difference between male and female students in terms of student perception of learning? The results showed that there was no significant difference between the scores of men and women. This result is consistent with the research of Kossioni et al. (2012), Denz-Penhey & Murdoch (2009), and Edgren et al. (2010).

In examining the second question of the research, is there a difference between male and female students in terms of student's perception of teachers? The results of this study showed that the level of scores was significantly higher among men than women.

In examining the third question of the research, is there a difference between male and female students in terms of student's academic self-perception? The results showed

that there was no significant difference between the scores of men and women. This result is consistent with various studies, including (Ayed & Sheik, 2008; Till, 2005).

In examining the fourth question of the research, is there a difference between male and female students in terms of student perception of the educational atmosphere? The results of this study showed that the level of scores was significantly higher among men than women.

In examining the fifth question of the research, is there a difference between male and female students in terms of student's social self- perception? The results showed that there was no significant difference between the scores of men and women. This result is consistent with various studies including Abraham et al., (2008) and Meshki et al. (2016).

In examining the sixth research question, is there a difference between male and female students in terms of the total score of the perception of atmosphere? In the present study, the score of men in the total score of the DREEM questionnaire is significantly higher than women, which is not consistent with the research of Altemani & Merghani (2017), Kossioni et al. (2012), Edgren et al. (2010), and Kim et al. (2016).

Therefore, students were more satisfied with this teaching method than other methods and the most important components of achieving the goals including applying Islamic education courses in the individual and social life of students, scientific and epistemological empowerment of students and the possibility of achieving high levels of learning in them, active participation of students to acquire religious knowledge in the form of class activities, giving correct answers to students' religious questions, increasing students' interest in acquiring Islamic knowledge by paying attention to students' needs and changing the educational situation from traditional one-way teaching methods to teaching based on active and process methods, growing critical power by creating a space for questions and answers and teamwork, paying more attention to research activities of Islamic knowledge, strengthening the spirit of trust in Islamic knowledge, and correcting and changing incorrect evaluation methods from what students have learned to continuous and reliable evaluation.

## **F. Conclusion**

The results of this study showed that students' satisfaction with teaching Islamic education courses in the problem-based learning method is positive; Therefore, the use of new educational methods such as problem-based teaching methods and student participation in class discussions as well as the application of educational content to improve students' education is appropriate. It can help to improve students' perception of social conditions. Moreover, one of the strengths of this method is the student-centered and process-oriented instead of text-centric and moving from central memorization to research-oriented.

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