



Evaluation of Team Teaching Method Efficiency in Postgraduate Students and Professors of Shiraz Health School, 2017

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Received 2018 September 03; Accepted 2018 September 10.

Abstract

Background: Team teaching method is an attempt to strengthen the spirit of teamwork among teachers and students as well as to expand scientific interactions between the teachers.

Objectives: This study aims to evaluate team teaching method among postgraduate students and professors of the Shiraz Health School based on a scientific approach.

Methods: This is a cross-sectional and descriptive-analytical study. Two modified questionnaires were designed for two groups of professors and students. Totally, 62 questionnaires were collected from different individuals with different educational backgrounds, including 21 professors and 41 students. The collected data were entered in the Excel software and data analysis was done by *t*-test via STATA software version 12.

Results: A total of 60.98% of students believed that team teaching improves people's spirituality and mentality. 63.41% of them agreed with the effective role of this teaching method in learning. 56.10% of students and 62.30% of professors agreed with teaching of a certain course by different professors with different specialties. Moreover, 43.25% of the professors agreed with having a fellow in teaching. 80.95% of them agreed with dividing the duties of professors according to their expertise and 80.96% of them agree with regular meetings through a course. The results indicated that there is a significant difference between two groups regarding the effects of team teaching on the relationship between teachers and students (*P* value = 0.04), appropriate scheduling and planning in team teaching method (*P* value = 0.01), and the effects of this method on better understanding of the students (*P* value = 0.003).

Conclusions: According to the results, this teaching method can be considered as an appropriate alternative to traditional methods. With correct implementation of this educational technique, classrooms will be transformed from teacher-centered to team and interactional classrooms, and interactions between professors and students will be improved during courses.

Keywords: Team Teaching Method, Efficiency, Postgraduate Students, Shiraz, Iran

1. Background

Among different activities carried out for the education of students, the greatest contribution is given to the teacher-centered method in the classroom (1). Teaching is a conscious activity with a specific purpose, which causes a change in learners. The teacher deals with different variables in teaching and tries to manipulate and control them in order to create a situation in which learning can be achieved (2). In order to increase the influence of the teacher and other educational activities on students, the teacher must be dominant over two significant factors: the correct method of presenting the lesson, and the content of the lesson (3).

Teacher-centered and team methods are the most com-

mon teaching methods. Some studies have indicated that about 80% of the information provided by the conventional teacher-centered method used in most universities of the country are forgotten in 8 weeks (4). Learning via teacher-centered method is inevitable for everyone at a time, which due to the fact that it is efficient for providing basic information and empirical sciences, and even in some circumstances, it is the most appropriate teaching method. However, in this way, the student will not have an opportunity to think, which is essential in learning. Therefore, educational systems have felt the necessity of revising the traditional methods of teaching and using new methods, such as active learning and student-centered methods (5).

Postgraduate education systems, as the most promi-

ment embodiments of investing in human resources, play a significant role in training of efficient human resources. These systems account for a significant share of budget in each country and have a decisive role in various economic, social, cultural, and political dimensions of the society. In this regard, efficient performance quality with the aim of preventing the loss of human resources and high competence ability for the future are the inevitable necessities for each organization (6, 7).

One of the new approaches to teaching and learning is team work. In all successful educational systems the productive and continuous process of science production is a collective and cooperative process that requires team skills along with cooperation and collaboration instead of competition and individual effort.

Since teaching and education are still among the main concerns of higher education institutions and faculty members, they should be updated and new strategies and methods should be taken into consideration (8). Team teaching method is an attempt to strengthen the spirit of teamwork among teachers and students, and to expand scientific interactions between the teachers.

Various definitions have been presented for team teaching method; some of the most important ones will be referred to (9, 10). The concept of team teaching was first introduced by Alexander (father of the American middle schools) in a conference held in Cornell University. He formed groups of three and five from middle school teachers in order to execute the team teaching method on large groups including 75 to 150 students. He recommended significant teaching strategies for team teaching approaches and expanded training environments for teachers to learn this method (10).

Team teaching refers to cooperation of two or more than two teachers who help each other in scheduling, running, and evaluation of some group subject areas. They use various teaching techniques and methods with the aim of improving and expanding their own attitudes as well as improving student's skills (8, 11).

In the recent years, team teaching has become an inseparable part the schedule of important universities, such as Stanford University. In this university, in addition to human sciences, other fields of science are taught with team teaching method. Therefore, teachers with different specialties accept to teach a certain course (12). Awareness from effectiveness of team teaching method helps the teacher select an appropriate method for improving his or her teaching quality (13).

2. Objectives

Apart from all the mentioned advantages of team teaching method, students and critics declared their serious objections regarding inconsistency between the teach-

ers, their teaching methods, and teaching content. Therefore, this study aims to evaluate team teaching method among postgraduate students and professors of Shiraz health school based on a scientific approach. The results of this study created the opportunity to analyze efficiency of this approach in different courses, majors, and grades of postgraduate studies (master or Ph.D.). Eventually, by analyzing the results, we can provide the best and most efficient teaching method for students in the future.

3. Methods

This is a cross-sectional, descriptive-analytical, and practical study. The statistical population of this research consists of all the faculty members, with academic rank of assistant professor or higher, and postgraduate students of Health School of Shiraz University of Medical Sciences in 2017.

Among all the distributed questionnaires, 62 questionnaires were filled by different individuals with different educational backgrounds, including 21 university professors with academic ranks of assistant professor, associate professor, full professor, as well as 41 master and Ph.D. students. Both of these groups contained males and females with different ages.

The questionnaire of this study was designed based on a review of literature in domestic and foreign texts. Two separate questionnaires were designed for two groups of professors and students. These questionnaires were retrieved from Karimi et al.'s (8) paper, which was conducted on the team teaching method from the viewpoint of postgraduate professors and students of Isfahan University. A pilot study was done in order to confirm the validity and reliability of designed questionnaires.

The questionnaire of the present study contains 17 questions for the groups of professors and 10 questions for the group of students. The answers are scored based on a 5-point Likert scale from strongly agree to strongly disagree (1 to 5). The collected data were entered and processed in the Excel software. Data analysis was done by *t*-test via STATA software version 12.

Our variables were quantitative, which means and standard deviation were reported. The questionnaire includes two sections of students and professors with five options of strongly agree, agree, neutral, disagree, and strongly disagree, the sum of these numbers was five. Finally, the means of similar questions in both groups were compared with the score five.

4. Results

This study aimed to evaluate the satisfaction of professors and students of Shiraz Health School from the team

teaching method compared to traditional teaching methods as well as factors affecting it.

A total of 60.98% of students believed team teaching improves people's spirituality and mentality. 63.41% of the students agreed with the effective role of team teaching techniques and methods in learning. 56.10% of the students agreed with teaching of a certain course by different professors with different specialties.

62.30% of the professors agreed with teaching of a certain course by different professors with different specialties. Moreover, 43.25% of the professors agreed with having a fellow in teaching. 80.95% of them agreed with dividing the duties of professors according to their competencies and expertise.

Furthermore, 80.96% of the professors were agree with regular meetings through a course, 57.15% of them were agree with collaborative meetings of teaching team before and after a semester, and 66.67% of them were agree with a scheduled timetable for each professor.

Table 1 indicates the mean comparisons of different variables in team teaching method of both student and professor groups. The results indicated that there is a significant difference between two groups regarding the effects of team teaching on the relationship between teachers and students (P value = 0.04). Moreover, there is a significant difference between two groups regarding an appropriate scheduling and planning in the team teaching method (P value = 0.01) and the effects of this method on better understanding of the students (P value = 0.003).

However, both groups had a consensus regarding other study variables (better learning with team teaching method, innovativeness of team teaching method, and teaching based on a scheduled timetable).

From the viewpoint of students, the highest mean scores of the responses are related to "scheduled timetable in team teaching and the positive effects of this method on average score of students".

From the viewpoint of professors, the highest mean scores of the responses are related to "appropriateness of evaluating the lessons taught by the team teaching method in comparison with other used methods and the positive effects of team teaching method on interactions between students and teachers".

Table 2 indicates the comparison of studied variables of team teaching method based on gender (female and male) from the viewpoint of students. In this section, no significant difference was observed between the viewpoints of males and females on the questioned variables.

Moreover, Table 3 indicates the comparison of some of the studied variables of team teaching method based on grade and from the viewpoint of students. In this section, no significant difference was observed between the viewpoints of people in master or Ph.D. grades on the team teaching technique.

5. Discussion

In the last quarter of the 21st century, there are a lot of scientific evidences that sensitizes us to how students learn and the environmental factors that affect their learning. Many of the weaknesses and educational problems of students are not in psychological and social issues, but in methods of studying and learning and presentation of teaching contents (14).

The strategies and teaching methods of universities have played a much more effective role in the success or failure of education programs (15, 16). The most effective factor in achieving these goals is teaching methods, and it is stressed that each university should, in addition to its educational content, update teaching strategies and practices and always be exposed to new experiences.

However, it should be noted that success of any educational approach and strategy is dependent on considering the steps that are useful for its effective implementation. In this way, it can be effective in all circumstances and can lead to desired results.

One of the new methods of teaching is a team teaching method that is also known as group teaching and group training. Efficiency of this method is subject to some requirements. The results of one of the studies in this field indicated that the most important requirement for a team teaching method from the viewpoint of professors and students was a joint meeting of professors before the beginning of a semester regarding lesson plan, resources, and assignments. There were some differences between the viewpoints of students and professors in other requirements (8).

The purpose of this study was evaluation of team teaching method efficiency in comparison with traditional methods in two groups of postgraduate students and professors. The results indicated that there was a consensus between the two groups regarding the most important factors affecting students' learning (better learning by team teaching method, innovativeness of team teaching method, and teaching based on a scheduled timetable). These findings were similar to those of Karimi et al. (8).

From the viewpoint of students, "teaching based on a scheduled timetable in team teaching method" has the highest priority. This finding is consistent with the reported results of Carless (17) and Rogoff et al. (18). From the viewpoint of professors, "appropriateness of evaluating the lessons taught by the team teaching method in comparison with other used methods and the positive effects of team teaching method on interactions between students and teachers" has the highest priority.

From the viewpoints of both professors and students, a joint meeting between professors before the beginning of the semester and having multiple sessions to plan team courses was necessary. This improves students' learning and interactions between teachers and students. It also

Table 1. Mean Comparison of Studied Variables Regarding Team Teaching Method in Two Groups of Students and Professors^a

Variables	Student	Professor	P Value
Closer relationship of students and teachers in team teaching method	2.56 ± 1.24	3.23 ± 1.26	0.04
Better learning in team teaching method	0.78 ± 0.49	0.78 ± 0.57	0.98
Suitable scheduling and planning in team teaching method	3.31 ± 1.14	2.25 ± 1.67	0.01
Better understanding of students from educational content in team teaching method	2.56 ± 1.11	3.47 ± 1.07	0.003
Innovativeness of team teaching method	2.68 ± 1.23	2.90 ± 1.26	0.50
Teaching based on a scheduled timetable	2.6 ± 1.18	3.14 ± 1.31	0.17

^a Values are expressed as mean ± SD.**Table 2.** Comparison of Some Studied Variables of Team Teaching Method Based on Gender (Female and Male) from the Viewpoint of Students^a

Variable	Females	Males	P Value
Improvement of spirituality	2.65 ± 1.14	2.48 ± 1.36	0.66
Positive effects on scores	3.35 ± 1.22	3.14 ± 1.10	0.57
Effects of team teaching method on learning different techniques an sciences	2.45 ± 1.09	2.47 ± 1.24	0.94
Effects of team teaching method with different professors on learning	2.45 ± 1.23	2.61 ± 1.43	0.68
Appropriateness of timetable scheduling and planning in team teaching method	3.35 ± 1.18	3.28 ± 1.14	0.86
Specific knowledge of professors in team teaching method	2.35 ± 0.93	2.61 ± 1.24	0.44
Better understanding of students from educational content in team teaching method	2.5 ± 1.10	2.61 ± 1.16	0.73
Innovativeness of team teaching method	2.7 ± 1.26	2.66 ± 1.23	0.93
Teaching based on a scheduled timetable in this method	2.6 ± 1.18	3.14 ± 1.31	0.17

^a Values are expressed as mean ± SD.**Table 3.** Comparison of Studied Variables in Team Teaching Method Based on Grade (from the Viewpoint of Students)^a

Variable	Ph.D.	Master	P Value
Effects of team teaching method on students' scores	3.53 ± 1.12	3.07 ± 1.16	0.22
Effects of team teaching method on learning different techniques an sciences	2.66 ± 1.39	2.34 ± 1.01	0.44
Effects of team teaching method with different professors on learning	2.6 ± 1.18	2.5 ± 1.42	0.81
Appropriateness of timetable scheduling and planning in team teaching method	3.26 ± 1.27	3.34 ± 1.09	0.83
Specific knowledge of professors in team teaching method	2.6 ± 0.98	2.42 ± 1.17	0.62
Better understanding of students from educational content in team teaching method	2.66 ± 1.11	2.5 ± 1.14	0.65
Innovativeness of team teaching method	2.8 ± 1.4	2.61 ± 1.29	0.65
Teaching based on a scheduled timetable in this method	2.93 ± 1.62	1.84 ± 1.34	0.83

^a Values are expressed as mean ± SD.

improves the effectiveness of lessons in the team teaching method. These findings are similar to the reported findings of Karimi et al. (8), and Steinert et al. (19).

5.1. Conclusions

According to the results and based on the positive viewpoints of both groups, this teaching method can be considered as an appropriate alternative to traditional methods. With correct implementation of this educational

technique, classrooms will be transformed from teacher-centered to team and interactional classrooms, and interactions between professors and students will be improved during courses. Therefore, students will obtain their desired results in learning educational contents.

The most important principles that should be taken into consideration in team teaching are: interaction and joint meeting of professors before the beginning of the semester and during the semester, using various techniques and methods in teaching, simultaneous atten-

dance of the professors in the beginning of the semester to clarify their way of teaching, having mutual responsibility and attention to the scheduled timetable for each professor, and dividing the tasks based on expertise of the professors.

Acknowledgments

We are grateful to all the participants in this study. Authors are grateful for the assistance (grant No.: 95-01-04-13933) of the vice chancellor for Research and Technology at Shiraz University of Medical Sciences (SUMS).

Footnotes

Authors' Contribution: Study concept and design: Aboozar Soltani and Marziae Shahriari-Namadi. Analysis and interpretation of data: Aboozar Soltani. Drafting of the manuscript: Aboozar Soltani, Tahereh Ghasemi, and Marziae Shahriari-Namadi. Statistical analysis: Aboozar Soltani and Tahereh Ghasemi.

Conflict of Interest: All authors declare that they have no conflict of interest.

Ethical Considerations: We have no intervention or sampling from a human. This was a questionnaire-base study, however, all procedures performed in this study were in accordance with the Ethical Standards of the Institutional and/or National Research Committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Financial Disclosure: No conflict or competing financial interests exist.

Funding/Support: This study was financially supported by the vice-chancellorship for research and technology at Shiraz University of Medical Sciences (SUMS).

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