

# Peer Teaching Experience of the First Year Medical Students from Turkey

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## ABSTRACT

**Objective:** To document peer teaching activity performed by first-year medical students and their views on the teaching activity.

**Study Design:** Survey.

**Place and Duration of Study:** Medical Education Department, Ataturk University, Erzurum, Turkey, in the 2012 - 2013 academic year.

**Methodology:** Volunteer students were selected for peer teaching model by an academician from the Medical Education Department. Students were taught subjects selected from classes such as biochemistry and microbiology in the same way as the academicians do. Following each class activity, the teaching student was assessed by the other students on a 5-point rating scale. Written and verbal feedback was also obtained from both teaching students and participated students. Verbal feedbacks were noted by a faculty member and similar opinions were categorized. Data were analyzed by SPSS version 20 statistical program.

**Results:** Eleven students took part in the program. Feedback was received from students 171 times. The mean number of students participated was  $24.4 \pm 14.3$  in each program. Statistical analysis revealed that mean value for teaching materials, peer instructors and teaching environment were  $4.62 \pm 0.49$ ,  $4.63 \pm 0.47$  and  $3.88 \pm 1.27$  respectively.

**Conclusion:** Peer teaching method is a pretty good way of teaching for medical students. It is a practicable technique that can be used in medical training. Taking part in this program as a lecturer, student increased students' self-confidence in the learning and teaching activities. Quite positive feedbacks were received.

**Key Words:** Peer-teaching. Learning. Medical student.

## INTRODUCTION

The history of peer education goes back to 1957.<sup>1</sup> Peer instructors are defined as students at the same level of education with less experience than teachers.<sup>2</sup> Peer teaching has become very popular in medical faculties in recent years. Although there are several studies in the literature, it is uncertain how many faculties have actively used peer teaching. Different terminology can be used to express peer teaching; such as peer-assisted learning, near-peer teaching, co-coaching, peer tutoring, peer marking, doctor as teacher, students as teachers, teaching assistant, etc.<sup>3</sup>

Peer to peer teaching plays an important role in learning. Crowded classes may pose a disadvantage by preventing profound learning and comprehension of many lessons. Peer teaching allows students to play an active role in learning and teaching, strengthens communication between students. It can provide learning opportunities not only to medical students but also residents and faculty members.<sup>4</sup> The time students

spend on instructing others may be more productive than that spent learning by themselves.<sup>5</sup>

The purpose of this study was to document peer teaching activity performed by first-year medical students and their views on the teaching activity.

## METHODOLOGY

This study was designed as descriptive study and conducted at the Medical Faculty of Ataturk University in Erzurum, Turkey. At the time of the study, there were 330 students enrolled in the first year of the medical school. Eleven volunteer students were selected for peer teaching in the 2012 - 2013 academic year by an academician from the Medical Education Department. Inclusion criteria was to be first class student, to be volunteer and to accommodate this programme. Exclusion criteria was to be foreign student and to have speech disorder. The Medical Education Department lecture hall was used for classes.

Following each class activity, the teaching student was assessed by other students. A 5-point rating scale was used for evaluation. The evaluation was performed in three areas: the education materials, the instructor and the teaching environment. Values between 1 and 5 were awarded as: 5-perfect, 4-very good, 3-good, 2-borderline and 1-inadequate. Data were then collected in three categories. Perfect and very good areas were considered in one category, good in one category and

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borderline and inadequate in another category (Table I). A time schedule for the lessons was planned. All lessons were supervised and written; verbal feedbacks were obtained by one academician who was the coordinator of the first grade of medical faculty and working in the field of medical education for 4 years. Students were supplied with resources and materials and the class was organized. The supervisor beforehand instructed the students about how the feedbacks should be given.

Descriptive statistics and the frequency of the responses based on 5-point rating scale were measured. In addition, verbal feedbacks were noted by a faculty member and similar opinions were categorized.

All analyses were performed with the Statistical Package for Social Sciences, version 20 (SPSS Inc., Chicago, IL, USA). The data was given as a mean, standard deviation, number and percentage.

## RESULTS

Eleven volunteer students, 4 males and 7 females, took part in the peer teaching program. Students taught subjects selected from classes such as biochemistry, medical genetics, histology and embryology, anatomy and microbiology, in the same way as members of the academic staff. During the program 171 times feedback was received from the participants.

A mean number of  $24.4 \pm 14.3$  students attended each teaching program. Statistical analysis revealed a mean score of  $4.62 \pm 0.49$  for teaching material,  $4.63 \pm 0.47$  for the peer instructors and  $3.88 \pm 1.27$  for the teaching environment.

The area where students did their best was keenness to present the subject, raising the knowledge and awareness of the class and respect for participants' opinions (Table I).

The aspects students needed to improve were starting and finishing classes in time and determining the lesson objectives. The teaching environment (the hall) was assessed by students as the category most in need of improvement.

**Table I:** High level of participants views in the study.

	Inadequate/borderline		good		Very good/perfect	
	n	%	n	%	n	%
Appropriate for the subject	0.0	0.0	7	4.1	164	95.9
The material is up-to-date	1.0	0.6	13	7.6	157	91.8
Increased my knowledge of the subject	1.0	0.6	5	2.9	165	96.5
Created a safe environment	1.0	0.6	12	7.0	158	92.4
Was eager to present the matter	0.0	0.0	2	1.2	169	98.8
Clear and understandable	2.0	1.2	7	4.1	162	94.7
Started and finished on time	4.0	2.3	9	5.3	158	92.4
Stated, and reached the goal	4.0	2.3	16	9.4	151	88.3
Encouraged to think	2.0	1.2	13	7.6	156	91.2
Respectful views of participants	0.0	0.0	6	3.5	165	96.5
Good use of visual material	0.0	0.0	14	8.2	157	91.8
Summarized the topic	2.0	1.2	5	2.9	164	95.9
Environmental comfortable	25.0	14.6	37	21.6	109	63.7

**Table II:** Student's views.

My self-confidence grew
I learned much more than by studying at my own
I thought I had a social phobia but I managed to speak in the public
I enjoyed studying together with my colleagues
A dialogue developed between us
I better understood the points I missed, failed to understand or had difficulty grasping
The study environment was very comfortable
Our classmates explained the subject matter in their own words
I would consider to be an academician in the future

A very positive feedback was received from students after these procedures. The students' views were summarized in Table II.

## DISCUSSION

A student-centered approach is becoming increasingly important. There is currently much focus on the need for the curriculum to become student-centered. Each individual has his/her own unique style.<sup>6</sup> Learning through teaching is also a learning style.<sup>7</sup> One study emphasized that the instructor is 5% effective in the learning pyramid, reading 10%, visual learning 10%, demonstration 33%, discussion 50%, applied learning 75% and teaching to others 90%.<sup>8</sup> Since everyone has his/her own different learning style, peer teaching can represent a different opportunity for learning-teaching for students (Table II). By teaching and preparing the lesson, students can grasp that subject better and more permanently. Students with a listening learning style will also have a better opportunity to listen to lessons taught by their peers.

In the verbal feedback we received from the students in this study, emphasized that they felt like educators and might consider an academic career. Harden described the importance of assuming an active rather than a passive role in learning, of students expressing themselves as individuals, of providing feedback and of encouraging students, and suggested that these can affect career selection.<sup>9</sup> Peer education can encourage students and guide them on the subject of careers (Table II). Another study referred to such adverse effects

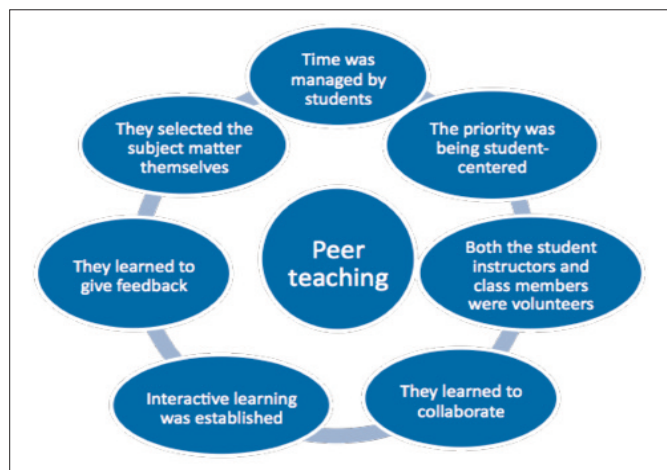


Figure 1: Features of peer-teaching.

of teacher-centered education as learning being based on memorization, being hierarchical, and encouraging fear and shyness.<sup>10</sup> The students in the present study enjoyed assuming responsibility and playing an active role. Students emphasized that they found medical teaching rather boring, that it was based on memorization; they eventually forgot the information acquired and were always sitting passively in class.

Peer teaching develops students' clinical and teaching skills. In addition, it contributes to their professionalism.<sup>11</sup> We think that students' teaching skills can be developed while they are still students. Taking part in such activities can expand students' horizons and develop feelings of self-confidence. Students can learn to work in a team and collaborate. They may understand one another better and establish empathy since they form a small social group of the same age.<sup>12</sup> Mutual respect, a component of professionalism, can be acquired while the individual is still a student. The high level of respect for participant views in this study confirms this (Table I). The importance of feedback in learning and teaching is indisputable. Giving and receiving feedback allows to see those areas in need of improvement.<sup>13</sup>

A letter written to an editor emphasized the need for more female academics.<sup>14</sup> There is no doubt that women are more attentive to detail and can raise different points to males. As in all fields in today's world, there is also a need for female academics in the sphere of education. In this study, female students exhibited greater initiative and represented 7 of the 11 peer instructors.

Doctors have many duties and responsibilities they need to cope with when they start their professional lives. They have to care for their patients, perform operations if they are surgeons, teach their patients, teach students, train assistants, organize educational activities such as congresses and seminars, perform research, write

papers, contribute to the curriculum and, most important of all, make themselves good educators. In that respect, they can acquire characteristics of being an educator while they are still students. This program can be easily applied to other classes. Students can also develop their teaching skills with such activities.

## CONCLUSION

Peer teaching method is a pretty good way of teaching for medical students. It provides many advantages whereby they can develop themselves. It is a practicable technique that can be used before and after graduation and in ongoing medical training. Volunteer students taking part in the peer teaching program as both instructors and participants gave them self-confidence on the subject of learning and teaching. Quite positive feedbacks were received.

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