

# The Relationship Between Some Teaching Micro Skills During Classroom Teaching and the Level of Students' Learning

Majid Akbari,<sup>1</sup> Atefeh Nemati-Karimooy,<sup>2,\*</sup> and Fatemeh Zourmand Ghasemi<sup>3</sup>

<sup>1</sup>Associated Professor of Restorative Dentistry, Center of Excellence in Medical Education Technology, Mashhad University of Medical Sciences, Mashhad, IR Iran

<sup>2</sup>Assistant Professor of Restorative Dentistry, Department of Restorative Dentistry, School of Dentistry, Mashhad University of Medical Sciences, Mashhad, IR Iran

<sup>3</sup>Dentist, Mashhad University of Medical Sciences, Mashhad, IR Iran

\*Corresponding author: Atefeh Nemati-Karimooy, School of Dentistry, Vakil-Abad Blvd., Mashhad University of Medical Sciences, Mashhad, IR Iran. Tel: +98-9151098060, E-mail: Nematika@mums.ac.ir

Received 2016 March 17; Revised 2016 June 11; Accepted 2016 June 14.

## Abstract

**Background:** Achieving the characteristics of effective teaching can play an undeniable role in assurance of education.

**Objectives:** The aim of this study was to assess the relationship between some teaching micro skills during classroom teaching and the level of students' learning.

**Methods:** At the beginning of this cross sectional study, a list of professors' behavioral-verbal characteristics during classroom teaching, which might lead to a more efficient learning, was prepared. These items were checked according to the check list by two students after attending the class. At the end of each session, an exam with appropriate validity was held to evaluate the amount of learning. The correlation between the students' scores and the teaching skills of the professor was analyzed through SPSS software ( $\alpha = 0.05$ ).

**Results:** A significant correlation was found between "Absence of mumble in the class" ( $P = 0.015$ ), "fun atmosphere in the class" ( $P = 0.032$ ), "not merely reading the slides by the professor" ( $P = 0.003$ ), "mentioning the objectives at the beginning of each session" ( $P = 0.011$ ) and "lack of voice monotony" ( $P = 0.023$ ), and the increase in the mean of students' scores. However, there was not a significant relationship between designating a break time during teaching period ( $P = 0.120$ ) and "the rate of teaching" ( $P = 0.774$ ) with the mean of student's achieved scores.

**Conclusions:** According to the conditions of this study, the ability to control the class in terms of absence of mumble, establishing a fun atmosphere, not merely reading the slides by the professor, mentioning the objectives at the beginning of each session and lack of voice monotony increase the learning level in classroom teaching.

**Keywords:** Education, Professor, Student, Learning, Teaching Skills

## 1. Background

The primary purpose of classroom teaching is transferring the knowledge to the students' to establish learning (1). Education is a complex process that any kind of negligence about it can lead to waste of forces and facilities and fail to achieve the educational purposes or decreasing the quality of education (2). In the process of education, teaching and learning are interdependent parts. In fact, teaching can promote self-learning process in students (3).

If we consider teaching as an activity, it would mean that it can be observed as objectivity, without the necessity to refer to learning for inferring it (4).

On the other hand, some scholars consider the activity of teaching as a science and discuss that there are some principles and rules for teaching, which must be detected and used through researches while others consider it as an art and believe that it is affected by many factors such

as personal needs and beliefs of teachers. At the same time, another group of researchers consider teaching as a science-based art or an artistic science and establish connections between these two viewpoints (4-7). Teaching activity emerges with four measures which are as follows: 1) making connection i.e. attracting attention for learning, 2) continuing connection i.e. getting interested in the activity related to learning, 3) making the connection effective i.e. employing rules and principles for facilitating learning, and 4) ending connection i.e. assuring the furtherance of learning and its continuation (4). Considering a professor's performance in each of these steps, different methods of teaching are formed, which can be called "teaching skills" (4).

In situations such as traditional classrooms of Iran's faculties where it is hard to create extensive methods without a fundamental reform, we have to use traditional

methods in order to maximize the learning efficiency of students. These methods make a university professor distinct from the viewpoint of students and rate him as good. The ability to establish an effective communication is one of the characteristics of effective teaching (8). For establishing a persistent relation, the professor can try different ways to attract the attention of students and involve them in the topic by stating the purpose of the subject. At the same time, the professor might quiet or pacify the students and answer their questions and watch the emergence of interest in them (4).

The ability to communicate effectively can be a function of personality and academic characteristics of the professor. Studies have shown many personal characteristics of the professor which can be considered for interaction between the professor and the student. Some of these characteristics include respecting the students, helping them with solving their problems with empathy and mutual understanding, being cheerful, having positive and energizing manner, being interested in education, gender, communication style, rhetoric, ability to control the class, the effectiveness of the professor's voice for teaching, and appearance and discipline (8, 9). One of the major methods for the evaluation of the professors is to evaluate them from the viewpoint of students, but some factors irrelevant to professors' teaching quality can affect the students' opinion on the quality of teaching and it can reduce its value (10). Considering the significant role of teacher on the level of students' learning, recognizing the characteristics of a good professor and attempting to achieve these characteristics by the teachers, can improve the quality of teaching. Studies evaluating the effect of behavioral characteristics during teaching on the level of learning are rare.

## 2. Objectives

According to the value of learning evaluation, the purpose of this study was to evaluate the effectiveness of some teaching micro skills on classroom teaching and the level of students' learning.

## 3. Methods

This was a cross sectional study conducted among the third-grade students of the faculty of dentistry. In the first phase for determining all the factors which could be effective on the quality of learning, a qualitative study had been designed and a meeting was held by the project conductor using the ten-member focus group of top students of the class regarding their attention in the classroom.

In this meeting, a complete list of behavioral-verbal teaching skills of the professors during teaching which

may lead to attract the attention of the students and increase the learning level in classroom teaching was prepared. The purpose of this focus group discussion was to prepare a checklist of these characteristics validated by the students. In this meeting, an interviewer and a note keeper were present using a tape recorder, and the opinions of group were collected using the effective methods in collecting opinions and probing the tips. Then, a list of effective factors was prepared by categorizing the subjects and deleting similar items.

At the beginning of the project, the lesson plans of all the professors for their classroom teaching during the semester were collected. In order to prepare a test with a proper content validity for evaluating the level of learning, five questions were designed from each subject and submitted to the related professor, while they were asked to confirm the appropriateness of the questions and to edit the questions based on their special learning objects.

Then, 15 students who were top-rated and satisfied in participating in the project were selected. Fifty three faculty members and 136 class sessions which were all of the theoretical class sessions for third year students in one semester were included in the study. At the end of each class, these 15 students were asked to answer the prepared validated test, showing the learning level of them as a group of students that try to attend mentally in the classes.

In order to record the characteristics of each professor members in teaching, the prepared checklist including several behavioral-verbal teaching skills was given to two of the participant students in each class. The checklist was filled out based on the fact that whether each of these characteristics about the mentioned teachers is true.

In the last phase, the correlation between the mean of students' scores with professors' characteristics were investigated. The data were analyzed using SPSS version 11.5 ( $\alpha=0.05$ ) and Pearson correlation test.

## 4. Results

The teaching micro skills assessed in this study were as follow:

- 1) Absence of mumble in the class
- 2) Fun atmosphere in the class
- 3) Lack of voice monotony
- 4) Not merely reading the slides by the professor
- 5) Mentioning the objectives at the beginning of each session
- 6) Designating a break time during teaching
- 7) Teaching speed

"Absence of mumble in the class" had a significant relationship to increasing the mean of students' scores ( $P=$

0.015). Additionally, there was a significant relationship between “fun atmosphere in the class” and the mean of students’ scores ( $P = 0.032$ ). There was no significant relationship between “designating a break time during teaching” and the mean of students’ scores ( $P = 0.120$ ). Also a significant relationship was observed between the mean of students’ scores and “not merely reading the slides by the teacher” ( $P = 0.003$ ). “Mentioning the objectives at the beginning of each session” had a significant relationship to the mean of students’ scores ( $P = 0.023$ ); while there was no significant relationship between “teaching speed” with the mean of students’ scores ( $P = 0.774$ ).

## 5. Discussion

There are various methods for evaluating professors, but the most common method in Iran is the evaluation of the professor by the students, which is so controversial. Factors unrelated to the quality of teaching such as leniency of the professor, difficulty or simplicity of the subject, the number of students, the discipline of the classroom, academic rank of the professor, gender and personal characteristics of students, the academic semester, the expected and the real score of the students, physical and social charisma of the professor and etc. affect the evaluation of the professors and their teaching (10, 11). Thus, in order to evaluate the effect of the professors’ skills on students’ learning, this study was conducted by giving a test with appropriate validity to the students instead of using questionnaires which need to be answered by them regarding the quality of teaching. This method appears to improve the assessment of students’ learning.

Our focus group was made of top-rated students because of two reasons. Since our goal was to achieve some points for promotion and increasing the attractiveness of learning, only students were included, not the teachers, and considering that often more successful students care more about their learning, the students ought to be top-rated.

Students with lower grades would rather be studied in a separate project so that we can understand that which factors might be able to attract the attention of such students to learning. This assessment is not in the limitations of our study because our goal of assessing the norm. If all of the students of a class were participated in the study, the number of contributing factors was so increased that drawing a conclusion would get really difficult. So, we merely concentrated on the students who themselves had strong desire and trend to learning. In such cases, skills and effort of teachers could be effective.

Our study showed that, the ability to control the class session in terms of absence of mumble, establishing a fun

atmosphere, not merely reading the slides by the professor, mentioning the objectives at the beginning of each session and lack of voice monotony increase the learning level during classroom teaching.

Actually, it was found that absence of mumble in the class has a significant relationship to increasing the mean of students’ scores. Teylor et al. showed that the ability of organizing the class session by the professor is one of the most important and effective factors in teachers’ evaluation by the students (12). It seems that the presence of mumble in the class is a sign of teacher’s failure in communicating with students, which is one of the main elements of teaching. As a result, the learning level of students decreases. In addition, disregarding the mumble by the professor in class appears to reduce the concentration and learning level of students. Mousapour believes that if students pay enough attention, concentrate on the subject and follow the subject actively while the teacher is speaking, teaching will be successful (4).

Similarly, fun atmosphere in the class might establish a better relationship between the student and the teacher and increase the students’ attention to their teacher’s words. Such kind of atmosphere prevents exhaustion in the listener and improves learning. Additionally, creating a happy atmosphere by the teacher reflects the level of patience and his interest towards teaching, which is one of the most important characteristics of professors according to Ghorbani’s study (13).

As it was mentioned before, continuing the interaction between the professor and the student is one the phases of teaching (4). As it can be seen in this study, lack of voice monotony and increasing and reducing the tone of voice might have a significant effect on students learning and it can attract the students’ attention to the teacher. In the study of Akbari et al., students had considered the changing tone and voice level during teaching as an important item affecting the classroom teaching (14).

In this study, there was no significant relationship between designating a break time during teaching and the mean of students’ scores. It might be due to the fact that students lose their concentration and attention to the teacher, and it would be necessary to spend time for re-establishing the teacher-student interaction. Since this study was conducted following one-hour classes, it seems to be useful to examine this variable in class sessions with longer-period duration in future studies.

Reading slides by the professor can be considered as a lack of the professor’s sufficient mastery over the teaching subject in students’ opinion, and it may decrease the students’ tendency to listen to the teacher’s words. In Hossini’s study, it showed that regarding the teaching skills from the students’ viewpoint, the main priority in

evaluation of the professor is their mastery of the subject (15). The studies conducted by Dadkhah and Teylor showed that the mastery of professor on the subject and the ability to present the lesson is one of the most important characteristics of a good professor from the viewpoint of the students (12, 16). Most students mentioned that having fluency is one of the most important characteristics of a good professor (13), on the other hand reading the slides can have a negative effect on this item. In addition, reading the slides might prevent the eye contact of the professor and students, which can lead to the reduced concentration of students and the mumble in the classroom.

Mousapour believes that mentioning the objectives of the lesson is one of the effective measures in attracting the students' attention which leads to an acceptable interaction between the professor and students (4). The results of his study are in consistency with our results which showed a significant relationship between mentioning the objectives at the beginning of the lesson and the mean of students' scores.

In fact, there are many "behaviors" or "skills" that could be analyzed in such a study but we included the most common ones. Other factors might be studied in similar surveys. The advantage of our study is that instead of including several factors, it has focused on learning and is not only based on the attitude of students and teachers.

### 5.1. Conclusion

All in all, according to the conditions of this study, the ability to control the class in terms of absence of mumble in the class, establishing fun atmosphere in the class, not merely reading the slides by the professor, mentioning the objectives at the beginning of each session and lack of voice monotony increase the learning level during classroom teaching.

### Acknowledgments

We thank research chancellor of Mashhad University of Medical Sciences for financial assistance of this project No. 900801.

### Footnote

**Authors' Contribution:** Study concept and design, Majid Akbari; acquisition of data, Fatemeh Zourmand Ghasemi;

analysis and interpretation of data, Majid Akbari, Atefeh Nemati-Karimooy; drafting of the manuscript, Atefeh Nemati-Karimooy; critical revision of the manuscript for important intellectual content, Majid Akbari, Atefeh Nemati-Karimooy; statistical analysis, Majid Akbari; administrative, technical, and material support, Majid Akbari; study supervision, Majid Akbari

### References

- Bland CJ, Wersal L, VanLoy W, Jacott W. Evaluating faculty performance: a systematically designed and assessed approach. *Acad Med*. 2002;77(1):15-30. [PubMed: 11788318].
- Oshvandi K, Bikmoradi A. The Effects of Inquiry-Based clinical Instruction of Nursing students on applying Nursing process skill. *J Hamadan Nursing Mid*. 2013;21(1):5-15.
- Benor DE, Leviyof I. The development of students' perceptions of effective teaching: the ideal, best and poorest clinical teacher in nursing. *J Nurs Educ*. 1997;36(5):206-11. [PubMed: 9145338].
- Mousapour N. The concept of teaching and its essential questions Strides in Development of Medical Education. *SDMEJ*. 2015;1(1):48-56.
- Zahorik JA. Teaching: Rules, Research, Beauty, and Creation. *J Curri and Super*. 1987;2(3):275-84.
- Eisner EW. *The enlightened eye: Qualitative inquiry and the enhancement of educational practice*. New York: Macmillan; 1991.
- Rubin L. Artistry in teaching. *Educational leadership*. 1983 ;40(4):44-9.
- Ghadami A, Salehi B, Sajadi S, Naji H. Students' points of view regarding effective factors in establishing communication between students and faculty members. *Iran J Med Edu*. 2007;7(1):149-54.
- Esfendiyari G. Study the Stressors in Students of Kurdistan University of Medical Sciences and Its Relation to Their General Health in 1999 [in Persian]. *Teb va Tazkieh*. 2001;43:57-64.
- Aliasgharpour M, Monjamed Z, Bahrani N. Factors affecting students' evaluation of teachers: Comparing viewpoints of teachers and students. *IJ Med Edu*. 2010;10(2):186-95.
- Crumbley L, Henry BK, Kratchman SH. Students' perceptions of the evaluation of college teaching. *Quality Assur Edu*. 2001;9(4):197-207. doi:10.1108/eum000000006158.
- Teylor T, Rivikin E. *Teachers ,schools and academic achievement*. Washington DC: National Bureau of Economic Research; .
- Ghorbani R, Haji-Aghajani S, Heidarifar M, Andade F, Shams-Abadi M. Viewpoints of nursing and para-medical students about the features of a good university lecturer. *koomes*. 2009;10(2):77-84.
- Akbari M, Moeintaghavi A, Ghanbari H, Bageri M, Otoufi A. A Comparison of the Students' and Teachers' Viewpoints about the Characteristics of a Good Teacher in Dentistry. *J Mash Dent Sch*. 2015;38(4):281-90.
- Hossini M, Sarchami R. Attitude of students of qazvin medical university towards priorities in teachers assessment. *J Qazvin Uni Med Sci*. 2002;22:33-7.
- Dadkhah B, Mohammadi M, Mozafari N, Mohammadnejad S, Molaee B, Dadkhah D. Students Viewpoint about the features of a good university professor in Ardabil university of Medical Sciences in 200. *J Ardabil Uni Nurs and Midwif*. 2009;11(4):44-50.