

Teachers' And Students' View Points About The Characteristics Of Effective Teaching, Birjand University Of Medical Sciences And Health Services, April 2003-4

Ghaderi R, (MD)¹; Dastjerdi R, (MSc)²

¹ Assistant professor, Dermatology Department, Birjand University of Medical Sciences and Health Services

² Psychologist

Received: May 2005

Accepted: July 2005

Abstract

Background and purpose: As achieving the intended goals in medical education necessitates the utilization of effective teaching & learning methods, in order to further retention of the knowledge, continuous research is needed to study the factors affecting the quantitative and qualitative development of medical education. This study was to recognize the factors delineated by the students and teachers as to be important in the teaching-learning process.

Methods: this was a cross-sectional descriptive-analytic study comprised of 880 students and 68 teachers at the Medical University of Birjand, lasting from April 2003 till April 2004. SPSS software and statistical test of Mann-Whitney were used for data analysis.

Results: In this study, teachers' and students' opinions about the characteristics of an effective teaching-including

Professional, and personal characteristics of the teachers, and motivation students toward independent learning each consisting of several items – were assessed with regard to their sex, marital status, residential status, educational level, and educational group.

The results were as the followings: Professional characteristics of the teachers: Mastery over the subject, rational sequencing of the subject matters, proper use of the basic knowledge of the related discipline, and use of simple language in teaching, were the choices rated by the teachers and students as the most important ones. Personal characteristics of teachers: self confidence in teaching, interest in teaching, clear speech were the choices most rated by the teachers and students.

Amongst the 3 characteristics of an effective teaching, teachers gave the first priority to motivation the students toward independent learning, while students regarded the professional characteristics of the teachers as the most preferred one.

Conclusion: The study found that teachers and students regarded mastery over the subject, self-confidence in teaching, use of simple language in teaching, interest in teaching, and clear speech as the most important factors necessary for having an effective teaching.

Keywords: EFFECTIVE TEACHING, PROFESSIONAL CHARACTERISTICS' PERSONAL CHARACTERISTICS, MOTIVATING STUDENTS TOWARD LEARNING

Journal of Medical Education Summer 2005; 7(2);95-102

Introduction

One of the main problems of educational systems is failure to reach the predetermined educational

goals. Educational goals generally must be exalted, ideal, and useful, as an educational system tries to train individuals with suitable personal, social, and academic growth, as well as essential skills necessary for playing their future roles in the society. If a teacher has positive personal characteristics and choose authentic teaching objectives, his students are

Corresponding author: Dr Reza Ghaderi, Assistant professor of dermatology in Birjand University of Medical Sciences
Tel: 0561-444-30-41

likely to achieve the intended objectives (1).

In every educational system, teaching and what happens during the class time are integral to the goals achievement, because there is a positive correlation between teaching behavior and student's educational progress. In better words, teaching consists of the totality of teacher's behavior, influencing on the learning process of students (2,3). Therefore, the most important characteristics of an effective teaching are objectivity, being systematic, and flexibility (4). Learning environment and factors affecting it: this consists of teacher, student, teaching content, and resources, and applies to motivation toward learning, awareness of knowledge or skill deficits, and the recognition of the needed knowledge or skill (5).

Five major factors are to be considered in learning: memory, preparedness of mind, motivation, structure, and feedback (6).

Of the different teaching methods, lecture is an important one. Lecture provides a reinforcement that other teaching methods fail to provide. As an art teacher said: I enjoy lecturing. This is the most exciting method of providing a critical concept of an idea or information about a subject to the most number of students in the least time. The larger the classes, the cleverer my teaching. Which other teaching method would give you the opportunity to share your interest and love to art with 50 individuals in a so limited time (7).

Methods

This cross-sectional descriptive-analytic study was conducted in April 2003 - April 2004 in Medical University of Birjand. All teachers and students at Medical University of Birjand.

Data were collected by the inquirers directly referring to classes, dormitories, hospitals. First teachers and students were informed about the aim of the study, then they were given the questionnaires and 30 minutes to fill them out. Data collection tools: teachers' and student's opinions were obtained using a questionnaire designed using the advices of guiding, counseling and referee teachers for the thesis, as well as other teachers at the University. A sample of

questionnaire is included in the article.

The variables of the study were marital status, age, sex, educational phase, residential status educational group, and also professional characteristics including 12 variables, personal characteristics including 8 variables, and motivating students to independent learning including 2 variables.

Rough data were entered the SPSS software, and the output data were then further analyzed by Mann-Whitney test, using frequency charts, percentages and diagrams. The cut off point for the data to be considered as significantly different was with $P < 0.05$. It should be noted that to rank the priorities, first rates given to each one of the components 3 characteristics of an effective teaching were added up, then the ones that had the least values were chosen as the most preferred one.

Questionnaire

Effective teaching characteristics form the view point of the teachers and students at the Medical University of Birjand "for the students"

Sex: male female marital status: single
married

Educational level: Associate degree B.S
P.H.D. (If you are a medical student please
specify your stage: Basic sciences
Physiopathology

Clerkship internship) Residential
status: resident non-resident

"for the teachers"

The following characteristics are related to the professional competencies of the teachers. Please specify your preference by rating them from 1 to 11 respectively.

Sex: male female
Educational group: Basic sciences
Clinical sciences

The following characteristics are related to the professional competencies of the teachers. Please specify your preference by rating them from 1 to 11 respectively.

Professional Characteristics of a teachers

1. mastery over the subject, 2. Rational sequencing of the subject, 3. Proper use of the

basic knowledge of the related discipline,)4(Using simple language in teaching)based on the prior knowledge of the students(,)5(preparing class for the discussion on the subject,)6(availability on out of class hours,)7(Using teaching aids,)8(Using standard tests and avoiding from showing partial views in grading students,)9(regular check of students' attendance,)10(doing more study and research about the subject for a better teaching, 11. Use of teacher prepared handouts by the students before the class

The following characteristics are related to the personal characteristics of the teachers. Please specify your preference by rating them from 1 to 8 respectively.

Personal characteristics of a teacher

1. Self confidence in teaching 2. Interest in teaching 3. Clear speech 4. Decisiveness and severity, 5. Flexibility 6. Tolerance to critiques 7. Humourness 8. Neatness

The following characteristics are related to motivating the students to study and learning. Please specify your preference by rating them from 1 to 4 respectively.

Motivating the students to independent learning

1. Giving example for better understanding 2. Relating the subject to the fieldwork and students' future roles. 3,4 ? !!!!

Please rank the 3 choices of personal characteristics, professional characteristics, and motivating the students to learning, based on your preference.

Personal characteristics, professional characteristics, motivating the students to learning.

Results

The study comprised of 897 student of whom 606 were girls and boys were males, 732 were single and 165 were married, 138 were

residential and 759 were non residential. 481 were studding in associate degree, 144 in B.S, 114 in basic science, 75 in clerkship, and 42 in internship stage. Of the 68 teachers participated in this study, 48 were men and so were women, 24 were teaching basic sciences and 24 clinical sciences.

Table 1. Comparison of total rating given by male and female teachers for the professional characteristics

Total ratings separated by sex	Professional characteristics	
	Man	woman
A= Mastery over the subject	63	27
B=Rational sequencing of the subject	186	64
C=Proper use of the basic knowledge of the discipline	234	77
D= using simple language in teaching)based on the prior knowledge of the students	212	103
E= Preparing class for the discussion on the subject	281	113
F= Availability during out of class hours.	466	199
G=Using teaching aid materials.	291	115
H=Using standard tests and avoiding from showing partial views in grading students for a better teaching	420	166
I= Regular check of students' attendance for an effective teaching	429	193
J= Doing more study & research about the subject for a better teaching	316	112
K= use of teacher prepared handouts by student before the calss.	457	215
L = Punctual attendance	296	164

Mann- Whitney test =-3.291

P=0.001

As the table shows, male teachers chose mastery over the subject, rational sequencing of the subject, and using simple language in

teaching, a their most valued priorities respectively, while female teachers chose mastery over the subject, rational sequencing of the subject, but proper use of the basic knowledge of the discipline as their first priorities respectively. Regarding the P-value of 0.001, there is a significant correlation between the two groups.

Table 2. Comparison of the total rating given by male and female teachers for the personal characteristics.

Total ratings separated by sex		Man	woman
Professional characteristics			
M= Self confidence in teaching		114	43
N=Interest in teaching		78	29
O=Clear speech		49	116
P= Decisiveness and severity		270	110
Q= Flexibility		258	112
R= Tolerance to critiques		250	105
S=Humourness		322	144
T=Neatness		288	128

Mann-Whitney test $Z=-2.415$ $P=0.016$

As the table shows, both male and female teachers chose interest in teaching, self confidence in teaching, and clear speech as their first priorities respectively. Regarding the P-value of 0.016, there is a significant correlation between the two groups.

Of the characteristics of an effective teaching, male teachers ranked motivating students to independent learning, personal characteristics, and finally professional characteristics respectively, as their priorities, where as female teacher's choices were motivating students to independent learning, professional characteristics and personal characteristics respectively. Regarding a P-value of 0.05, there was a significant correlation between the 2 groups.

Ranking the characteristics of an effective teaching by basic and clinical sciences teachers.

Of the professional characteristics, basic

sciences teachers chose mastery over the subject, rational sequencing of the subject, and proper use of the basic knowledge of the discipline as their first choices respectively, where as clinical sciences teachers' choices were mastery over the subject, rational sequencing of the subject, but using simple language in teaching, respectively. ($P=0.083$). Of the personal characteristics both basic and clinical teachers chose interest in teaching, self confidence in teaching, and clear speech, respectively as their first choices ($P=0.141$). Both basic and clinical sciences teachers ranked the characteristics of an effective teaching as motivating the students to independent learning, professional characteristics, and personal characteristics, respectively ($P=0.046$).

Ranking the characteristics of an effective teaching by male and female students

Of the professional characteristics, male students chose mastery over the subject, rational sequencing of the subject, and proper use of the basic knowledge of the discipline respectively as their first priorities, while female students' choices were mastery over the subject, rational sequencing of the subject, but use of simple language in teaching respectively ($P=0.000$). Of the personal characteristics, male students chose clear speech, self confidence in teaching and interest in teaching respectively as their first priorities while female students' choices were having self confidence in teaching, clear speech, and interest in teaching, respectively. Regarding a P-value of 0.012, there was a significant correlation between the 2 groups. Of the characteristics of an effective teaching, students of both single and married groups ranked professional characteristics, personal characteristics and motivating to independent learning respectively as their priorities. ($P=0.05$).

Ranking the characteristics of an effective teaching by single and married students

Of the professional characteristics, students of both single and married groups chose mastery over the subject, rational sequencing of the subject, proper use of basic knowledge of the discipline respectively as their first choices ($P=0,000$). Of the personal characteristics, again

both single and married students chose self confidence in teaching, clear speech, and interest in teaching, respectively as their first choices ($P=0.001$). Single students ranked the characteristics of an effective teaching as professional characteristics, personal characteristics, and motivating students to independent learning, respectively, while married students ranked them as professional characteristics, motivating students to independent learning and personal characteristics, respectively ($P=0.05$).

Ranking the characteristics of an effective teaching by the resident and non resident students.

Of the professional characteristics, resident students chose mastery over the subject, use of simple language in teaching; proper use of basic knowledge of the discipline respectively as their first choices, where as non resident students choices were mastery over the subject, rational sequencing of the subject, and use of simple language, respectively ($P=0.001$).

Of the personal characteristics, students of both resident and non-resident groups chose self confidence in teaching, clear speech, interest in teaching, respectively, as their first choices ($P=0.001$). Resident students ranked the characteristics of an effective teaching as professional characteristics, motivating students to independent learning, and personal characteristics, respectively, where as non-resident students ranked them as professional characteristics, personal characteristics, and motivating students to independent learning respectively ($P=0.05$).

Ranking the characteristics of an effective teaching by associate degree and B.S. students

Of the professional characteristics, associate degree students chose mastery over the subject, use of simple language in teaching, and rational sequencing of the subject as their first choices, while B.S. students' choices were mastery over the subject, rational sequencing of the subject, and proper use of basic knowledge of the discipline respectively ($P=0.000$). Of the personal characteristics, students of the both

group of associate degree and B.S. chose self confidence in teaching, clear speech, interest in teaching, respectively as their first priorities ($P=0.001$). Students of the both groups ranked the characteristics of an effective teaching as professional characteristics, motivating the students to independent learning, and personal characteristics, respectively ($P=0.046$).

Ranking the characteristics of an effective teaching by the students from basic sciences and physiopathology stages

Of the professional characteristics, students from the both basic sciences and physiopathology stages chose mastery over the subject, rational sequencing of the subject, and use of simple language in teaching as their first choices ($P=0.000$). Of the personal characteristics again students of the both groups chose self confidence in teaching, clear speech, and interest in teaching as their first priorities ($P=0.001$). Students of the both groups ranked the characteristics of an effective teaching as professional characteristics, personal characteristics, and motivating the students toward independent learning respectively ($P=0.046$).

Ranking the characteristics of an effective teaching by students from clerkship and internship stages

Of the professional characteristics, clerks chose mastery over the subject, rational sequencing of the subject, and use of simple language, respectively, as their first priorities, while interns' choices were mastery over the subject, proper use of the basic knowledge of the related discipline, and rational sequencing of the subject, respectively ($P=0.005$) of the personal characteristics, the clerks chose clear speech, interest in teaching, and self confidence in teaching, respectively, as their first priorities, where as interns' choice were self confidence in teaching, clear speech, and interest in teaching respectively ($p=0.040$). Clerks ranked the characteristics of an effective teaching as professional characteristics, personal characteristics, and motivating students toward independent learning respectively, while interns ranked them as professional characteristics, motivating toward

independent learning, and personal characteristics respectively ($P=0.050$).

Discussion

Comparing the view points of male and female teachers about professional characteristics of teachers, male teachers ranked them as mastery over the subject, rational sequencing of the subject, and use of simple language in teaching respectively as their priorities, while female teachers' choices were mastery over the subject, rational sequencing of the subject, and proper use of the basic knowledge of the related discipline, respectively. Regarding a P-value of 0.001, there was a significant correlation between the two groups about the professional characteristics. Comparing the view points of the male and female teachers about the personal characteristics of the teachers, both groups chose interest in teaching, self confidence in teaching, and clear speech, respectively, as their first priorities. Regarding the P-value of 0.016, there was a significant correlation between the two groups,

Comparing the viewpoints of the teachers about the characteristics of an effective teaching, male teachers chose motivating students toward independent learning, personal characteristics, and professional characteristics, respectively, as their first priorities while female teachers' choices were motivating students toward independent learning, professional characteristics, and personal characteristics, respectively. However regarding a P-value of 0.05, there was a significant correlation between the two groups. Comparing the view points of the teachers from different educational groups about the professional characteristics of the teachers, the basic sciences teachers chose mastery over the subject, rational sequencing of the subject, and use of simple language in teaching respectively, as their first priorities, while the clinical sciences teachers' choices were mastery over the subject, rational sequencing of the subject and use of simple language, respectively. As it is seen, both groups chose mastery over the subject as their first priority. Regarding a P-value of 0.083, there was no

significant correlation between the two groups. Comparing the viewpoints of the teachers from the different educational groups about the personal characteristics of teachers, both groups chose interest in teaching, Self confidence in teaching, and clear speech respectively as their first priorities, regarding the P-value of 0.141, there was not a significant correlation between the two groups.

Comparing the viewpoints of the teachers from the different educational groups about the characteristics of an effective teaching, both groups chose motivating the students toward independent learning, professional characteristics, and personal characteristics of teachers, respectively, as their first priorities. Regarding the P-value of 0.046, there was a significant correlation between the two groups.

The results showed that out of the personal characteristics of teachers, self confidence in teaching was the most voted characteristic, followed by clear speech and interest in teaching. These results were consistent with the study by Mazlomi et al. They found knowledge and experience, and ability to communicate – components of self confidence- as the characteristics chosen by students for a good teacher. In their study, clear speech and interest in teaching also were of the essential characteristics of a good.

There was a little difference between the male and female students' view point about interest in teaching, and clear speech that would be attributed to their different sex specific attitudes. Regarding a P-value of 0.000, there was a significant correlation between the viewpoints of male and female students about the personal characteristics of teachers. The study showed mastery over the subject, rational sequencing of the subject, proper use of basic knowledge of the related discipline, and use of simple language in teaching as the most valued choices amongst the professional characteristics of a good teacher. The results of this study is consistent with the Ryan study (1960) in some parts. In his study, Ryan considered 3 important factors for an effective teaching, one of which was organized v.s. un programmed (opportunistic) teaching. This

characteristic would lead to rational sequencing of the subject and facilitating the transmission of knowledge. The results of this study can be correlated with the Rosen Shire study (1970) specifying 5 characteristics of a teacher that lead to educational progress.

Moreover, Mackay discussion about teaching strategies (1982) that lead to effective teaching, organization and rational sequencing of the subject were noted.

Comparing the viewpoints of male and female students about the characteristics of an effective teaching, both groups chose professional characteristics, personal characteristics, and motivating students toward independent learning respectively as their first priorities. Regarding the P-value of 0.05, there was a significant correlation between the two groups. It should be noted that the results of this study correlated with the study at the University of Shaheed Sadughi of Yazd, but did not correlate with the study at the University of Semanan. Which personal characteristics were their first choice. Comparing the viewpoints of the single and married students about the professional characteristics of teachers, both groups chose mastery over the subject, rational sequencing of the subject, and proper use of the basic knowledge of the related discipline, respectively as their first priorities. Regarding the P-value of 0.000, there was a significant correlation between the two groups.

Comparing the view points of the students with different marital statuses about the personal characteristics of teachers, both groups chose self confidence in teaching, clear speech, and interest in teaching, respectively, as their first priorities, regarding the P-value of 0.001, there was a significant correlation between the two groups.

Comparing the view points of the single and married students about the characteristics of an effective teaching, both groups chose professional characteristics, motivating students toward independent learning and personal characteristics of teachers, respectively, as their first priorities. Regarding the P-value of 0.05,

there was a significant correlation between the two groups.

Comparing the view points of the students with different residential statuses about the professional characteristics of teachers, resident students chose mastery over the subject, use of simple language in teaching, and proper use of basic knowledge of the related discipline, respectively, as their first priorities, while the non-resident students' choices were mastery over the subject, rational sequencing of the subject, and use of simple language in teaching, respectively. Regarding the P-value of 0.000, there was a significant correlation between the groups.

Comparing the view points of the resident and non resident students about the personal characteristics of teachers, both groups chose self confidence in teaching, clear speech, and interest in teaching, respectively, as their first priorities. Regarding the P-value of 0.001, there was a significant correlation between the groups. Comparing the viewpoints of the students with different residential statuses about the characteristics of an effective teaching, resident students chose professional characteristics, motivating students toward independent learning, respectively. Regarding the P-value of 0.05, there was a significant correlation between the two groups.

Comparing the viewpoints of students from different educational stages or levels, the associate degree students chose mastery over the subject, use simple language in teaching, and rational sequencing of the subject, respectively, as their first priorities, while B.S. students' choices were mastery over the subject, rational sequencing of the subject, and proper use of the basic knowledge of the related discipline, respectively. Regarding the P-value of 0.000, there was a significant correlation between the groups.

Students from basic sciences and physiopathology stages, chose mastery over the subject, rational sequencing of the subject, and use of simple language in teaching, respectively, as their first priorities. Regarding the P-value of 0.000, there was a significant correlation

between the two groups.

The clerks chose mastery over the subject. Rational sequencing of the subject matters, and use of simple language, respectively as their first priorities, while the interns' choices were mastery over the subject, proper use of the basic knowledge of the related discipline, and rational sequencing of the subject matters, respectively. Regarding the P-value of 0.005, there was a significant correlation between the two groups. Comparing the view points of the students from different educational levels or stages about the personal characteristics of teachers, both associate degree and B.S. students chose self confidence in teaching, clear speech, and interest in teaching, respectively, as their first priorities. Regarding the P-value of 0.001, there first priorities. Regarding the P-value of 0.001, there was a significant correlation between the two groups.

Students from both basic sciences and physiopathology stages, chose self confidence in teaching, clear speech, and interest in teaching, respectively, as their first priorities. Regarding the P-value of 0.001, there was a significant correlation between the two groups.

The clerks chose clear speech, interest in teaching, and self confidence in teaching, respectively, as their first priorities, where as the interns' choices were self confidence in teaching, clear speech, and interest in teaching, respectively. Regarding the P-value of 0.040, there was a significant correlation between the two groups.

Comparing the view points of the students from different educational levels and stages about the characteristics of an effective teaching, both associate degree and B.S. students chose professional characteristics, motivating students toward independent learning, and personal characteristics, respectively as their first priorities. Regarding the P-value of 0.046, there was a significant correlation between the two groups.

Students from both basic sciences and physiopathology stages chose professional characteristics, and motivating students toward independent learning, respectively as their first

priorities. Regarding the P-value of 0.046, there was a significant correlation between the two groups the clerks chose professional characteristics, personal characteristics, and motivating students toward independent learning respectively, as their first priorities, where as the interns' choices were professional characteristics, motivating students toward independent learning, and personal characteristics respectively. Regarding the P-value of 0.050, there was a significant correlation between the two groups.

References

1. Kazemi Y. Methods and techniques of teaching. Jahade Daneshgahi. Ghom, 1995; PP: 34-5.
2. Rahalzadeh R. Teaching methodology, a study about educational design. Tehran: Narmeh Publication, 1996; PP:17-8.
3. Wentzel K. Student motivation in middle school: the role of pedagogical caring. J Edu Psych 1997; 89: 411-9
4. Hamzeh S. Teaching practice in classroom. Tehran: Reshad Publication; 1996. p.9-10.
5. Safavi A. General teaching methods and techniques. Tehran: Mo'aser Publication; 1995. p.7-9
6. Azizi F. Teaching medical sciences: mission, vision, and challenges and perspectives. Tehran: Sandogh Refah Daneshjoian Publication; 2003. p.290
7. Berliner
8. Mazlommi SS. The features of a good teacher from the medical students' view point. Iranian journal of Medical education 2002;7:35.
9. Perot E. Effective teaching. New York: Longman; 1990. p.4.
10. Fallon SM, Groen LG. Teachers opinion on use of student evaluation. J Med Edu 1988; 63:612-4
11. Haji Aghajani S. The teachers and students opinion on the criteria for a good university teacher in Semnan University. Teb-o-Tazkieh 1999;41:47.