

Self-Assessment through Videotaping Compared with Peer and Trainer Feedback

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ABSTRACT

Objective: To assess and compare three different types of feedback for presentation skills, self, peer and trainer feedback.

Study Design: Cross-sectional study.

Place and Duration of Study: Faculty of Medicine at Atatürk University, Erzurum, Turkey, from March 2012 to December 2012.

Methodology: Participants were faculty members and instructor nurses. Each participant gave a 10-minute presentation, which was rated by peers, course trainers and the presenter himself/herself using a thirteen-item questionnaire (designed as a 5-point Likert scale). Peers and trainers conducted the assessment during the presentation while the self-assessment was done later by watching a video recording of the presentation. Comparison of the points between the groups was made using the two-way ANOVA. Pearson correlation analysis was conducted to evaluate the relationship between the mean scores of self-assessment, peer and trainer assessment.

Results: Ten faculty members, 27 instructor nurses and 4 trainers participated in the study. A total of 775 feedback reports were collected for 37 participants. There was no significant difference between the feedback scores of the evaluators as well as the occupation groups ($p > 0.05$). There was a strong positive and statistically significant correlation between trainer and peer ($r = 0.73$, $p < 0.001$).

Conclusion: Consequently, there were no differences in the evaluations of presentation skills between different stakeholders. Trainers should use the video recording method to self-evaluate their presentation skills, and they should invite their peers from time to time to improve their own personal development by using peer review methods.

Key Words: Feedback. Peer assessment. Presentation skills. Self-assessment.

INTRODUCTION

Individuals involved in the medical sciences have adopted a philosophy of lifetime learning. Therefore, continuous professional development requires a continuous assessment. Personal development is a *sine-qua-non* for career development.

Formative assessment is a basic component in personal, as well as in professional development and has a key role in the learning process.¹ Formative assessment is designed to aid learning, to define and rectify shortcomings and misconceptions, and it is easier for trainer to improve learning by this continuous feedback.²

Feedback is defined as "information about comparison between a trainee's observed performance and a given, standard performance that helps to improve the trainee's performance".³ Feedback has a positive effect on the

performance of the trainees. It helps them to make constructive and appropriate plans to systematically approach and overcome the problems. Therefore, feedback promotes a more sound approach to learning.^{4,5}

There are generally three stakeholders in the formative assessment process: the tutor/trainer, peer, and the trainee him/herself. Though all stakeholders play an important role, self-assessment is one of the most important methods with regard to presentation skills.⁶

Self-learning is accepted as a mandatory skill for lifetime learning and is commonly reported to provide many advantages to the individuals who apply it.⁷ Meanwhile, it adorns the trainee with the skills of autonomy in learning and critical awareness in professional applications, and other skills including projection.⁸ According to self-determination theory, the autonomy is one of the three basic psychological needs that is essential for behaving functional and healthy.^{8,9} Individuals should be conscious of themselves, and they must evaluate their weakness and need to be develop skills so that they could provide internal motivation and allow self-organized learning.

Self-assessment, by promoting projection and self-criticism, plays a major role in the continuing development of trainees.¹⁰

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Peer and tutor, which are indeed an important part of formative assessment, as well as in assessment of presentation skills. However, self-assessment plays even more crucial role in other learning activities, which as yet are not being implemented thoroughly in assessments overall and particularly for presentation skills. Though it is difficult to assess themselves by trainees and usually believe on the feedback of tutor and peer. However, videotapes could be used for the assessment of presentation skills as it is already being used for other purposes such as assessing consultation skills.¹¹

There are several recommendations present for improvement of presentation skills, however, it is generally said that a trainer who maintains the attention of the participants with efficient presentations will be more successful in assisting the trainees in achieving their learning goals.¹²

As it is mentioned earlier that feedback in formative assessment plays a vital role in enhancement of knowledge and skills in the learning process either it is from trainers or peers, but self-assessment helps to develop a lifelong learning ability.¹³ There are several studies available which show comparison among all kind of feedback.

Hence, this study was conducted to compare different sources of assessment for presentation skills of trainers on a train-the-trainer course, namely self-assessment by using video tapes, peer reviews and trainer evaluations.

METHODOLOGY

This cross-sectional study was done during “the training of trainers” courses conducted between March and December 2012 by the Faculty of Medicine at Atatürk University. Participants were informed verbally about their data that would be used for educational research. The study was carried out in according to the rules of ethics.

In the context of the training of trainers course which was organized by the Ataturk University School of Medicine, initial theoretical lessons were about the presentation skills in large groups, whereas the presentation skills workshops in small groups were executed a few days later. Trainees were teaching the staff from the faculty of medicine (faculty members) and nurses from the teaching hospital (instructor nurses).

Ten faculty members, 27 instructor nurses, and 4 trainers from the department of medical education participated in the study. While three of the trainers were working at the Department of Medical Education, one of them was working at the Department of Family Medicine. They had already been certified as trainers of training course and the Association for Medical Education in Europe (AMEE) trainer's course.

Each participant was asked to give a ten-minute presentation that was videotaped. Topics of presentations were not pre-determined and each participant chose a topic which was to his/her liking. Feedback forms (Appendix 1) developed by consensus of trainers and experts working at Ataturk University and pre-tested during other workshops and reliability coefficient was 0.95. It was decided that it could be used to evaluate the teaching events in the context of both presentation and group workshops.¹⁴ It was distributed at the beginning of the presentation and were prepared according to the 5-point Likert Scale and included questions evaluating the education materials (3 questions), the presenter (9 questions), and the education media (1 question).

Feedback forms were collected at the end of the presentations from the trainers and peers. Self-feedback from the presenter on his/her own assessment was collected after the presenter watched his/her own videotape of the presentation.

The comparisons among evaluations (self, peer and trainer) were also analyzed. Data was entered and analyzed using the SPSS 20.0 software. Three different means of feedback from each presentation and total means were calculated. Comparison of the scores among the groups was made with two-way ANOVA. Pearson product-moment correlation analysis was conducted to evaluate the relationship of mean scores of self-assessment, peer and trainer. P-values of less than 0.05 were considered significant.

RESULTS

A total of 775 feedback reports were collected for 37 participants. Although the mean scores of faculty members (4.16 ± 0.65) were slightly higher than those of the instructor nurses (4.05 ± 0.76), this difference was not statistically significant ($p=0.06$). From the perspective of evaluators, peer evaluators gave maximum scores (4.11 ± 0.77) while self-evaluation

Table I: Mean scores according to groups and evaluators.

Groups	Evaluator	Total mean points	
		Mean	SD
Faculty Member	Self-evaluation (n=10)	4.01	0.59
	Trainer evaluation (n=30)	4.14	0.59
	Peer evaluation (n=71)	4.19	0.69
	Total (n=111)	4.16	0.65
Instructor nurse	Self-evaluation (n=27)	3.73	0.71
	Trainer evaluation (n=98)	3.88	0.63
	Peer evaluation (n=539)	4.10	0.78
	Total (n=664)	4.05	0.76
Total	Self-evaluation (n=37)	3.80	0.68
	Trainer evaluation (n=128)	3.94	0.63
	Peer evaluation (n=610)	4.11	0.77
	Total (n=775)	4.07	0.75

Two way ANOVA.
p-values for comparison profession = 0.06
p values for comparison evaluation groups = 0.08
p values for interaction profession and evaluation groups = 0.55

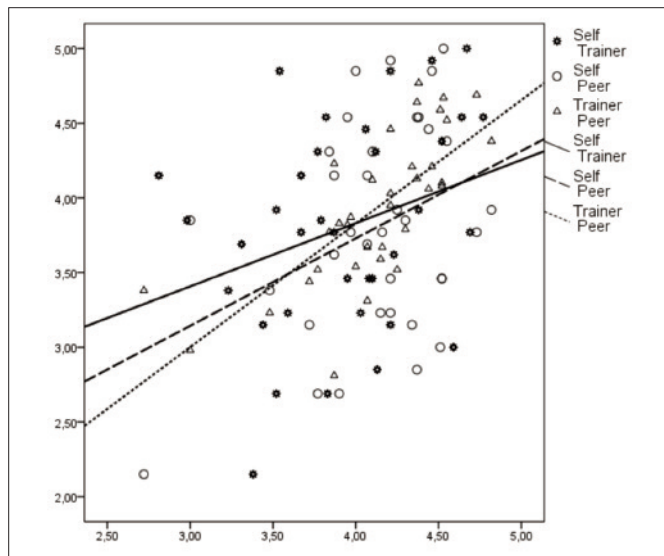


Figure 1: Correlations among trainer a peer and self-assessment.

received minimum scores (3.8 ± 0.68 , Table I). There was no significant difference between the feedback scores of the evaluators ($p=0.08$).

Total mean feedback points of instructor nurses and faculty members which were obtained from three different sources (self, peer, trainer) were similar. There was no interaction among them ($p=0.55$, Table I).

There was a strong positive and statistically significant correlation between trainer and peer ($r=0.73$, $p < 0.001$). There was a moderate positive correlation between peer and self-assessment ($r=0.36$, $p=0.003$).

There was no correlation between trainer and self-assessment ($r=0.30$, $p=0.08$, Figure I).

DISCUSSION

Feedback is essential for all trainers. Most trainers are aware of the importance of feedback and they would like to have help feedback.¹⁵ It is important that this study was conducted on two different occupational groups and the feedback on presentation skills was obtained from the three different sources; self, peer and trainer.

In this study, there was no significant difference between the feedback scores of both occupational groups from the self, peer and trainer's feedback. These results emphasized that feedback can be obtained from different sources and can apply to different occupations equally.

Today continuous professional development for trainers on learning and teaching is more important than in the past.¹⁶ Proficiently presenting his/her own views on different topics is a key skill for being a trainer. Therefore, it is a significant part of any training of trainers' courses. There is evidence for assessment of presentation skills of trainee by peer and trainers, however, self-assessment through videotaping has not

been evaluated as yet. Some similar studies on students have been performed, for instance in a study from the University of Kentucky, patient interviews of first year students were recorded on videotapes and later evaluated by themselves and by their peers.⁶

In a study from the University of Dokuz Eylul by Ozcarar *et al.*, efficiency of only the verbal feedback and feedback performed using videotapes were compared in evaluating communication and history taking skills of second year students.¹⁷

Another study in Korea depicted that interviews of medical students with patients were videotaped and then records were viewed later by the residents, professors and students. After watching, discussion was consisted of the student interviewer's opinions, other student physicians' opinions, and residents' and professors' feedback was held. By the feedback given to the students, positive developments have been achieved on their communication skills.¹¹ Similarly, videotaped the presentations, and the participants self-evaluated themselves after watching the videotapes.

Self-evaluation is frequently used in medical education to improve one's own capacity. This method is a valuable tool to identify strong and weak aspects of the trainees themselves, and to overcome the weak points by studying.¹⁸

The evaluations from 4 trainers are thought to be a positive contribution. Single trainer evaluations were found unreliable, where more than one trainer evaluations were found to be more reliable than peer evaluations in a study by Magin *et al.*, including the evaluations of 100 presentations annually over 4 years, comparing the reliabilities of trainer and peer evaluations.¹⁹

Another similar study has been done on fourth year dental students, however, it deals with the communication skills. The correlations among peer, trainers and self-assessment were analyzed and the most powerful correlation was found to be between the peer and trainer evaluations, similar to the current study. An intermediate level correlation ($p=0.35$) was found between self-assessment and trainer evaluations. There was a moderate positive correlation between peer and self-assessment in this study.²⁰ This result may reflect that the individuals have an appropriate approach in evaluating themselves.

Usually the peers may have a more critical perspective of each other, or the results may originate from the thoughts of the participants perceiving others as competitors in a competitive atmosphere and may therefore, sometimes produce bias, however, we took the mean scores of a great number of peer feedbacks to prevent this bias. In a study, this approach is found to be very helpful in situations where only peer assessments

Appendix 1: Feedback form. Educational Activity Evaluation Form.

Presented by:

Date:

Topic:

	5-Excellent	4-Very good	3-Good	2-Marginal	1-Insufficient
The material					
Was relevant					
Was upto date					
It increased my knowledge / awareness					
The presenter					
Established a "safe" atmosphere of trust					
Showed enthusiasm for the subject					
Was clear					
Was well organized					
Met announced objectives					
Encouraged interest, thinking, discussion, questions					
Listened to audience with respect					
Made effective use of audiovisual aids / handouts					
Summarized major points					
The physical environment					
The physical setting was comfortable					

What I learned:.....

What I liked best:.....

Suggestions for the presenter:.....

are performed and no other assessments were done from different perspectives. In this study, which was performed in a nursing school in Ireland, the students were included in a peer assessment and a positive effect of students evaluating students were found on learning and performing homework.²¹ Self and peer reviews were found to increase contribution and independence, the determination of presentation of one's own thoughts, improve thinking processes, and generate a system of self-awareness in many studies.^{2,4,22,23}

Nevertheless, this study also highlighted that videotaping could be used for self-assessment as methods of assessment by others.

The study has some limitations like small sample size but so far it is the study conducted on trainers, therefore, the results could be acceptable. Though the timing of presentation was not equal as lecture timing but as it was a practice session, therefore, a short presentation may give idea about deficiencies. Further study may be required to have a control group in order to generalize our results, therefore, it is recommended to conduct an experimental study on bigger sample size.

CONCLUSION

The findings of the current study demonstrated that videotaping can be used for self-assessment of presentation skills and it is as comparable as other sources of assessment.

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