ORIGINAL ARTICLE

What do trainers think about trainer training courses?

Zeliha Cansever,[1] Hamit Acemoglu,[2] Ummu Zeynep Avsar,[3] Zekeriya Akturk,[4] Turan Set,[5] Umit Avsar,[6] Yasemin Cayir[7]

Abstract

Objective: To evaluate the effectiveness of the training-of-trainer courses given to medical school faculty members, and to ensure the standardisation of training..

Methods: The study comprised faculty members attending seven training-of-trainer courses held at the Ataturk University, Turkey, from November 2010 to May 2011. Tests were administered to the participants evaluating their level of knowledge on course content before and after the five-day course, which covered topics including concepts of teaching/learning, curriculum development, assessment and evaluation, training methods, and training skills. Oral and written feedbacks were obtained from all participants on the last day of each course. Volunteers from among the participants evaluated the impact of training through a questionnaire after at least two months. SPSS 20 was used for statistical analysis.

Results: A total of 136 faculty members participated in the 7 training-of-trainer courses. The mean scores for the pre-test and post-test were 6.6±2.2 vs. 13.9±3.7, ($p<0.001$). Questions with highest percentage of correct answers in the pre-test were those about learning style 78 (70.9%) and the one about presentation skills (66.4%).

Conclusion: A structured training-of-trainer course is effective in increasing faculty members' level of knowledge about training. Such programmes are necessary for faculty members who work in the academic field without receiving formal training in teaching as it is the case with medical education in several countries.

Keywords: Training, Evaluation learning, Teaching. (JPMA 64: 491; 2014)

Introduction

Education is a life-long process. Trainers sometimes need to develop their knowledge, abilities and skills. Anyone can be a trainer, but not a good trainer. It is necessary for the trainers to develop their skills in order to be a good trainer. Different tools can be used to develop these skills.

Trainers have to use basic training methods to comprehend theories of learning and teaching. Even experienced faculty members need to develop their deficient aspects and to polish their skills. In fact, even people who have a leading role in education, i.e. administrative education leaders who develop medical faculty curriculum and who are in a decision-making position, need to improve themselves through seminars, student evaluations, workshops, academic courses, consultation and micro-techniques. It is only possible with training of trainers to transfer the developments in education to the trainers. Responsibilites of the trainers are getting more and more, and it is essential to keep up with the changes.[1]

Training-of-trainers (ToTs) is a kind of education that helps the trainers in developing their knowledge, skills and abilities. These courses are not used in only the medical field, but also across various specialisations, such as helping people quit smoking, pharmacy, nursing, etc.[2-6]

The current study was planned to evaluate the effectiveness of the ToTs given to medical school faculty members, and to ensure the standardisation of training.

Subjects and Methods

Atatürk University Medical Faculty, established in 1957 as a regional hospital Eastern Anatolia, Turkey, currently has both undergraduate and postgraduate programmes with more than 200 faculty members and about 1500 students.

ToTs courses were held in the last week of each month from November 2010 to May 2011 as part of a scientific research project (Table-1). The course content was given to the participants and their expectations were noted. Training materials were prepared as a folder for each participating faculty member and given to the participants before the course. The courses were held in the 60m^2 seminar room at the Department of Medical Education. A U-shaped seating plan was used during the presentations. At the end of each day, evaluation of the day's proceeding was performed. Review of the previous day was performed each training morning. The group leader wrote all activities on flip charts and these were hung on the walls of the training room where they remained throughout the training.

[1-3]Department of Medical Education, [4-7]Department of Family Midicine, Medical Faculty, Ataturk University, Erzurum, Turkey.

Correspondence: Zeliha Cansever. Email: dr.zelihacan@hotmail.com

Table-1: Training the Trainers Course Programme.

1st Day	2nd Day	3rd Day	4th Day	5th Day
	Summary of previous day	Summary of previous day	Summary of previous day	Summary of previous day
Opening ceremony, taking expectations and P0: Pretest	P4: Curriculum development	P7: Coach?ng and feedback	P10: MCQ and OSCE preparation	P13: Programme evaluation
P1: How people learn	P5: Learning objectives	P8: Small group teaching and PBL	P11: Test item quality	P14: Introducing our question bank software
P2: Features of a good teacher	G5: Curriculum development	G9: Large group teaching and presentation skills	G13: Small group teaching and PBL	G17: Programme evaluation
G1: How do I learn?	G6: Curriculum development	G10: Large group teaching and presentation skills	G14: Small group teaching and PBL	G18: Programme evaluation
G2: Whatkind teacher am I	G7: Learning objectives	G11: COACHING andfeedback	G15: MCQ and OSCE	G19: How to use our question bank software
G3: Personal needs assessment	G8: Learning objectives	G12: Small group teaching and PBL	G16: MCQ and OSCE	G20: Course summary and evaluation
G4: Personal needs assessment	P6: Large group teaching and presentation skills	P9: Trainee evaluation methods	P12: Slot for extra session if needed	P15: Post-test and certificate ceremony
P3: Instructional methods	Feedback	Feedback	Feedback	Feedback

P.:Presentation, G.:Groupwork

Pre- and post-training tests were administered to the participants, evaluating their level of knowledge on the course content before and at the end of training. The two tests had the same questions. The questionnaires were not handed over to the participants in order to prevent their distribution to the subsequent course participants, and the correct answers were not revealed either. Participants were asked 20 multiple-choice questions (MCQs) during these tests. Content validity was assured in a discussion with the core trainers and two project consultants. For each question, a correct answer was scored as "1" and a wrong answer was scored as "0". The course was held as a full-day programme over 5 days. During the courses, learning theories, curriculum development, assessment-evaluation, training methods, features of a good trainer, coaching, determination of learning need, peer evaluation, curriculum evaluation, question bank and evaluation system, preparation of problem-based learning scenarios, preparation of quality questions and presentation skills were studied in both theory presentations and group work. Percentages of the correct answers for each question in pre- and post-tests were calculated.

Training was conducted by 11 faculty members from 7 different specialties who had attended basic ToTs course previously. Each course was performed by 6-7 trainers. Faculty members attended the course as volunteers. At least two months after each course, a questionnaire evaluating to what degree the training had contributed to participants' own training charcteristics was performed through website. That questionnaire was evaluated according to 5-point Likert scale. Besides, oral and written feedbacks were received from participants about the course.

Data was presented as frequencies, percentage, means and standard deviations. The data were entered into SPSS 20 for analysis. Data normal distribution conformity was evaluated by One Sample Kolmogorov Smirnov Test. Paired samples t was used to analyse the difference between the pre- and post-test means. McNemar test was used to compare the answers given to each question in pre- and post-tests. Statistical significance level was set at $p<0.05$.

Results

A total of 136 faculty members, including 39 (28.7%) professors, 36 (26.4%) associate professors, 56 (41.2%) assistant professors, and 5 (3.7%) specialists, from 36 different departments, participated in the 7 ToTs courses. The participants who volunteered both for pre- and post-tests, numbered 112. The highest participation was in the last course with 22(19.6%) participants and the lowest participation was in the course with 12(10.7%) participants. Mean score for the pre-test was 6.6±2.2, which almost doubled to a mean post-test score of 13.9±3.7 ($p<0.001$).

Statistically significant improvements were observed in all items in the post-test ($p<0.01$). Questions with highest percentage of correct answers in the pre-test were those about learning style 78 (70.9%) and the one about presentation skills 71 (66.4%). The questions with the lowest percentage of correct answers were the Bloom's

Table-2: Rate of each correct answer from participants to pre- and post-tests.

Topics	Pre-test %	Post-test %	p
Training Methods	66.4	93.6	<0.01
Learning Styles	70.9	90.8	<0.01
Curriculum Development	13.9	90.8	<0.01
Characteristics of Good Trainer	58.2	90	<0.01
Preparing Effective Presentation	66.4	87.3	<0.01
Learning Model of Adults	45.8	82.6	<0.01
Problem-based Learning	35.6	74.3	<0.01
Programme Assessment	34.9	69.7	<0.01
Techniques of Preparing Multiple Choice Questions	29	69.1	<0.01
Writing Programme Objectives	33	67.3	<0.01
Methods of Defining Self-learning Needs	27.4	63.6	<0.01
Characterictic of Mass Lecture	36.4	62.7	<0.01
COACH Approach	33.3	59.6	<0.01
Question Quality	14.5	56.4	
Bloom's taxonomy of learning objectives	13	56.1	<0.01
Work of Defining Learning Needs	35.5	55.5	<0.01
Sample of Learning Objective	32.4	51.9	<0.01
Variety of Questions	15.3	45.5	<0.01
Curriculum Work	24.1	41.7	<0.01
Kolb's experience-based learning model	16.7	41.1	<0.01
For all items p<0.01			

taxonomy of learning objectives 10 (13.0%) and the steps of curriculum development 14 (13.9%) The questions with the highest percentage of correct answers in the post-test were the question about training methods 103 (93.6%) and the one about curriculum development 99 (90.8%). The questions with the lowest percentage of correct answers in the post-test were a question about curriculum and Kolb's experience-based learning model 44 (41.1%) When the difference between pre- and post-tests were assessed, the highest increase was found in the answers to the questions about Bloom's taxonomy of learning objectives (Table-2).

The feedback proforma was evaluated separately (Table-3).

Some of the feedback from faculty members had remarks, such as:

"Course was very useful,I realised I should develop myself more", "There was a warm atmosphere", "Trainers were very interested and willing", "It was the first time we had the opportunity to meet and socialise with our colleagues", "I had a training in a field I needed", "I got experience of group work," "The good thing was it was interactive so that we shared each other's experiences", "Having materials allowed us to follow presentations more easily", "Visual materials were sufficient", "It was very useful to summarise the course at the end of the day and to recall every morning", "Opinions of participants were respected".

Suggestions for aspects to develop were: "Training atmosphere should have been more comfortable", "Trainings shouldn't have been conducted over five full days, but half-day over a couple of weeks", "Index in training file should have been more explicit", "We weren't given any homework", "Technique of preparing presentation should have been taught better", "There should have been more presentations in English".

According to the questionnaire, the participants strongly agreed on particularly three things: Glad to attend (n=97; 85.8%), necessity of training the trainers (n=97; 85.1%); interactive training (n=96; 85.0%). The number of

Table-3: Assessment of training by participants.

	Disagree		Not sure		Agree		Strongly Agree		Mean	SD
	N	%	N	%	N	%	N	%		
Aims and objectives of the course were defined well	-	-	-	-	23	21.5	84	78.5	4.79	0.41
Aims of the course and training methods were matching	-	-	1	0.9	33	29.7	77	69.4	4.68	0.49
Trainers were well-prepared	1	0.9	1	0.9	29	25.4	83	72.8	4.70	0.53
Trainers motivated me to find new ways for achieving proficiency in training	1	0.9	1	0.9	39	34.5	72	63.7	4.61	0.56
Training was well-organized	-	-	3	2.7	36	31.9	74	65.5	4.63	0.54
Training increased my self-confidence	3	2.6	4	3.5	40	35.1	67	58.8	4.50	0.69
Messages were explicit and understandable	-	-	5	4.5	36	32.7	69	62.7	4.58	0.58
Trainers involved participants in training	-	-	1	0.9	16	14.2	96	85.0	4.84	0.39
Theoretical courses and group works were equal	-	-	3	2.6	26	22.8	85	74.6	4.72	0.51
I can practice what I learned	-	-	5	4.4	52	45.6	57	50.0	4.46	0.58
Opinions of participants were respected	-	-	-	-	26	23.2	86	76.8	4.77	0.42
Training atmosphere was good	4	3.5	2	1.8	32	28.3	75	66.4	4.58	0.70
I am glad I attended	-	-	-	-	16	14.2	97	85.8	4.86	0.35
I want to attend any activity for trainers	-	-	3	2.7	34	30.1	76	67.3	4.65	0.53
I think training trainers is necessary	-	-	-	-	17	14.9	97	85.1	4.85	0.36

participants willing to try any activity for the trainers (n=110; 97.4%) was notably high. They especially thought theoretical and group work were equal in significance (n=111; 97.4%). They believed that training increased self confidence (n=107; 93.9%) and one could practice things one learnt (n=109; 95.6%). Also, 111 (98.2%) participants thought training motivated them.

Discussion

ToTs courses are a relatively new phenomenon at the Atatürk University Medical Faculty, and regular conducting of courses has provided access to a large proportion of faculty members. Participation of faculty members from different specialties has enlivened the training sessions and thereby the participants feel readily encouraged. Furthermore, the courses have allowed the faculty members, who otherwise have a busy schedule, to meet, spend time together, benefit from each other's experiences and discuss medical training subjects.

Training of trainers is as important as the evaluation of the effectiveness of these trainings in the field of medical edcuation. In light of the tremendous responsibility of the trainers, it is difficult for them to improve their teaching skills which also include curriculum development, developoing learning objectives, presentation skills and giving effective feedback.

Trainers' training skill is very important and they need to improve such skills.[7] The importance of clinical trainers with specific skills along with basic training theories and principles has been emphasised, and it has been suggested that these would improve trainers' skills and sustained professional development.[8,9] Therefore, organising regular ToTs courses is crucial. In our study, the participants said the training had motivated them and they were willing to attend any such activity again.

ToTs allow personal needs and expectations to be addressed with lectures and courses, and enable teamwork by bringing different disciplines together. Improvement of the faculty is intermingled with the personal improvement of the trainer.[10,11] There was a balance between group works and theoretical courses during our courses too. That provided the participants with meeting, socialising and working opportunities in groups. Also, they were able to make use of each other's training experience.

Godfrey et al. particularly advocate that ToTs courses are beneficial for learning skills, namely planning and learning activities in small groups, identification of personal learning needs, summarising the main points of the subject, and providing feedback and state that these skills are significantly different between groups receiving or not receiving such courses. They demonstrated that these differences were particularly evident in factors such as the ability to identify learning objectives, select appropriate teaching methods for the subject, prepare presentations, explain concepts, behave according to the level of the trainees, plan and manage training based on small groups, include trainees in training and motivate them, understand their problems, help them identify their personal learning needs, summarise the subject effectively, and to evaluate the effectiveness of training.[12] Significant increases were found in the current study, particularly in the level of knowledge on curriculum development and Bloom's taxonomy of learning objectives. Also, it was demonstrated how important is the need to involve the trainers in their own trainings. It is necessary to attend such training willingly considering adults learn better when they are ready and willing.

Yolsal et al. reported that the courses had highly positive contributions to the personal training performances of more than 80% of their participants, and emphasised the importance of including students in lectures during training, facilitating learning, effective use of learning methods and specifying the objectives at the beginning of each education period. Furthermore, it was emphasised that ToTs courses are a part of self-assessment of trainers and are accepted as the first step towards becoming a trainer.[13] In terms of participation rates, assistant professors had a higher rate of participation compared to other faculty members, showing that they were more willing to receive training. It is believed that these courses will be more beneficial for new faculty members or when they are received even before becoming a faculty member.

ToTs are taken seriously in other countries, too. At the Bisheswar Prasad Koirala Institute of Health Sciences, training programmes were organised to improve teaching and learning skills of trainers in medical education. A training course was held as a workshop for 3 days in four different medical centres in Nepal for faculty members who had not received any prior ToTs courses and for new faculty members. They covered topics such as learning/teaching principles, writing learning objectives, assessment techniques, selection of training materials, and learning and teaching methods. They also underlined that it was highly important to give training to trainers in medical education and that the participants leaned towards such training courses, and even emphasised that the time given for training should be increased.[14,15] In our programmes, the participants indicated that these kinds of trainings were necessary and they were glad to attend.

In another study, it was emphasised that trainers should improve their strategies in giving feedback.[16] In the current study, trainers observed that participants adopted a behaviour of getting and giving feedback in writing after each presentation and group work and verbal feedback at the end of the day during the training. Ozyurda et al. reported that in the ToTs courses they held, trainers benefited with respect to giving constructive feedback, along with many other skills.[17] As observed in the present study as well, this need can be fulfilled by practices frequently performed during ToTs courses.

ToTs courses may help faculty members to develop good trainer characteristics, such as being a good listener, being kind and facilitative, and encouraging students to ask questions and think critically.[18] In this study, almost all participants explained they increased self confidence with the content of training and could practice what they learned.

Trainer doesn't mean only the one to transfer information. It is a complex work to prepare, present and plan. Knowledge, skills and attitude a trainer should have are: being a model preparing a safe atmosphere for education, realising own limits of knowledge and being brave enough to such limitations; being accessible to students; using technology of knowledge; actively giving positive feedback to learners; encouraging critical thinking; being a facilitator in small and large group settings.[19] With the help of group work in training the trainers, they can achieve characteristics such as being a facilitator and a coach, and writing objectives of learning accurately.

Conclusion

Being a good physician and being a trainer are quite different things. The teacher candidates in faculty of education receive separate formal trainings. There is no such programme in medical schools. This need can be compensated by training-of-trainer courses. ToTs is a beneficial and effective training methodology. Such academic activities should be regularly organised, and new faculty members, in particular, should receive this training.

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