

EVALUATION OF BASIC COURSE WORKSHOP CONDUCTED IN A MEDICAL COLLEGE

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ABSTRACT

BACKGROUND

Faculty development is perhaps one of the foremost issues among the factors influencing the quality of medical education. It was planned to evaluate Basic course workshop (BCW) on Medical education Technologies (MET) conducted in the institution with following objectives

1. To assess the effectiveness of the B CW in MET conducted in the Medical College.
2. To study the changes in teaching practices and assessment methods of faculties after the workshop.

MATERIALS AND METHODS

Present Evaluation study was conducted at the RTC (SCB Medical College, Odisha) of MCI in MET from February 2012 to December 2012. Kirkpatrick's model with four levels of program outcomes (reaction, learning, behaviour, and result) was used to evaluate the effectiveness of workshop. Convenient sampling method was used. All the faculties in the first 4 batches of the workshop were the study participants. Data was collected from the record of the RTC from the filled in Feedback form, Pre-Post test forms, filled semi structured questionnaire from the participants, in-depth interview of facilitators and focus group discussion of students. Descriptive statistics like percentage, Proportions and Chi-square test used.

RESULTS

A total of 67 faculties responded to the questionnaire. There was gain in knowledge for majority of faculties in different teaching learning process and assessment methods due to the workshop. More than 90% of faculties had the attitude to practice interactive teaching, PBL and preparing MCQs and structured oral questions. Self-reported change in teaching behavior and assessment method was reported by more than 80% of the faculties. Reasons for non-implementation were given as the lack of support from the institution (64%), from other faculties (34%), lack of self-motivation (13%). Facilitators were satisfied with the quality of training. But FGD conducted for the students revealed that they failed to recognize noticeable change in the teaching and assessment behavior of faculties.

CONCLUSION

Evaluation of the workshop revealed many encouraging facts like satisfaction of participants, their gain in knowledge in various methods of teaching and assessment. But implementation aspect was not encouraging.

KEYWORDS

Faculty Development, Medical Education, Evaluation.

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BACKGROUND

Faculty development is perhaps one of the foremost issues among the factors influencing the quality of medical education as it is increasingly recognised that capacity building of teachers is not only a cost-effective intervention, but also a long-term strategy to link medical education with the national health needs.¹ Faculty Development Program (FDP) includes variety of activities and programs relating to instructional development, personal development and

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organisational development. Centra described Faculty Development (FD) as "the broad range of activities that institutions use to renew or assist faculty in their roles" and includes initiatives designed to improve the performance of faculty in teaching, research and administration.² Sustainable faculty development requires a medical education unit/department staffed with respected faculty developers who are academic role models. FD needs to be systematic, involving planning, implementation and evaluation and should be tailored to suit the needs of individuals, disciplines and the institution. Faculty evaluation is an effective approach to faculty development.³

In general, FDPs are evaluated with diverse assessment instruments such as pretest/post test, retrospective self-assessment and independent performance ratings.^{4,5} Another type of program has been analysed with context, input, process and product evaluations.⁵ Many authors have



suggested using Kirkpatrick's (1994) four levels of outcomes to frame evaluation.⁶

Provision of faculty development related to teaching and assessment strategies is widely perceived to be the essential ingredient in efforts to introduce new curricular approaches to modify the educational environment.⁷ Accordingly, MCI has developed Basic Course Workshop (BCW) on Medical Education Technologies (MET), which is a three day long workshop on FD and the topics covered are group dynamics, adult learning, systems approach, teaching learning methods, newer trends in teaching learning, media in medical education, microteaching, evaluation essay type questions and short answer questions, objective tests and MCQs, item analysis, practical examination (OSPE, OSCE).⁸ All the sessions are conducted in interactive manner with demonstrations and group work. BCW is being conducted in the selected institutions, which is recognised by MCI as Regional Training Centre (RTC) in MET. All the health institutions located in a region are affiliated with the respective RTC for FDP. Hence, it was planned to evaluate the faculty development program conducted in the institution (RTC) with the following objectives-

1. To assess the effectiveness of BCW in MET conducted in the medical college.
2. To study the changes in teaching practices and assessment methods of faculties after the workshop.

MATERIALS AND METHODS

This study was carried out in SCB Medical College, Cuttack (one of the RTC in MET), during the period February 2012 to December 2012. Till November 2011, 4 batches of BCW in MET had been conducted in which 95 faculties had participated from 8 different allotted medical colleges. Convenience sampling method was used. Hence, all the faculty members who had participated in first 4 workshops conducted in the institution were the study subjects. Kirkpatrick's model with four levels of program outcomes (reaction, learning, behaviour and result) was used to evaluate the effectiveness of FDP.⁹ To know about the first two levels 'Reaction' (information on immediate outcome of the training like the reaction of the faculties on the workshop and usefulness of the training) and 'learning' (perception of the faculties on the gain in knowledge and skill in different topics discussed) data was collected from the filled in feedback forms and pre- and post-test forms of the participants collected during the workshop. To study the changes in 'behaviour' (in teaching practices and assessment methods) and 'result' (refer to changes in the organisation as a result of the workshop) data was collected by a questionnaire from the participants of the workshop in such a manner that a minimum time gap of 6 months was maintained between completion of training and data collection. Mixed methodology was used for data collection. The quantitative data was captured via self-administered semi-structured questionnaire. Qualitative method was used to gather information from the facilitators by in-depth interview and from the students by Focus Group Discussion (FGD).

The questionnaire was prepared for collection of data from the participant faculty members on sociodemographic information (gender, teaching experience, faculty position, type of college they were working), about the training experience they attended, their attitude on implementation aspect, perception on gain in knowledge on teaching learning method (TL method) and assessment after the workshop and about their current practice. For few of the questions, response were collected in 5-point Likert scale (regarding gain in knowledge, improvement in teaching skill, satisfaction level after attending the training) where 1=not at all, 5=most beneficial). In depth, interview was conducted for the facilitators regarding the workshop conducted by them and FGDs were conducted (only in the institution where workshops were conducted) among the students to collect data regarding the changes, which have been made on the teaching methods by the faculties who had attended the workshop.

With permission from the Dean of the Institute, Convenor RTC (regional training centre) MCI and approval of the Institutional Ethics Committee, detailed information were collected about total number of faculties participated from different institutions with their contact number and mail ID from the records maintained at RTC. After pilot testing, necessary modifications were made to the questionnaire. Then, with prior consent from the person concerned, data was collected. For the faculties of this institution, questionnaire was handed over in person after explaining them the purpose of the project. For the faculties who have attended from other institutions, questionnaire was e-mailed explaining them the purpose of this project over telephone and requesting them to participate and respond. When no response was obtained from the faculties even after contacting them personally thrice to return back the filled in forms, they were excluded from the study. Similarly, with no response from other faculties who were contacted thrice over telephone and e-mail were excluded.

In depth, interview was conducted for the facilitators. While conducting FGD for the students, they were explained about the project and FGD was conducted in a nonthreatening environment. No other faculties were involved during the procedure. Rather, data entry operator assisted in the FGD for record keeping. Three such focus group discussions were conducted with different batch of students (12-15 students in each FGD). Quantitative data was entered in the excel sheet and data was analysed using descriptive statistics like percentage and proportions. Chi-square test was used for association. Qualitative content analysis was used to gather meaning from the qualitative data.

RESULTS

A total of 67 faculties who had participated in the BCW conducted in the institution returned the questionnaires giving response rates of 71%. About 34% faculties were from clinical departments and rest were from paraclinical (45%) and preclinical departments (21%). An analysis of the participants according to their academic position showed

that 10% were professors, 39% and 49% were associate and assistant professor respectively and only one demonstrator. Majority of the faculties were females (75%) and were less than 50 years of age (61%), only 3% were above the 60 years of age (age range 32-61 years with median age of 44 years and standard deviation of 8.09 years). Teaching experience was less than 10 years for 50% of the faculties and 12% had more than 20 years of experience. Majority (82%) were from government medical colleges. All were actively involved in teaching. Because of self-motivation, 76% faculties had attended the workshop. Other reasons cited for attending the workshop were as required by MCI (24%), instruction from the Dean or Head of the department (19%). Before attending the workshop, 80% were aware about the training Program. 79% faculties were aware about their need to attend the BCW and equal percentage of faculties were interested to attend advanced faculty program.

Feedback forms collected from the RTC revealed that all the participant faculties were satisfied with the workshop in terms of gain in knowledge in TL process and assessment methods. About 84% faculties were of the opinion that the duration of the training should be increased to 4 days.

All the faculties had reported that the training atmosphere was conducive and as per the schedule all the topics were covered. Faculties had received communication prior to the workshop, which varied from 1 day to 6 days. From the communication, more than 90% faculties knew about the duration of the training, fee structure and time limit to apply. Only 86% had knowledge about the type of training.

All the faculties attending the workshop agreed that facilitators were resourceful and the sessions were interactive. Regarding the time management and about the usefulness of the topics discussed, 95% faculties had given their response in affirmative (Table 1).

	Strongly Agree Number (%)	Agree Number (%)	Neutral Number (%)	Disagree Number (%)	Strongly Disagree Number (%)
Resourceful faculties	44 (66)	23 (34)	-	-	-
Interactive session	49 (73)	18 (27)	-	-	-
Efficient time management	42 (63)	22 (33)	3 (4)	-	-
All topics useful	39 (58)	25 (37)	3 (4)	-	-

Table 1. Response of Faculties Regarding the Quality of Workshop (n=67)

Perceptions of the faculties regarding the gain in knowledge after the workshop in specific Teaching Learning (TL) methods were shown in Table 2. There was self-reported gain in knowledge for majority of faculties in different teaching learning process due to the workshop, but no statistical difference was found among the faculties of different disciplines.

	Strongly Agree Number (%)	Agree Number (%)	Neutral Number (%)	Disagree Number (%)	Strongly Disagree Number (%)
Adult learning principle	36 (54)	25 (37)	6 (9)	-	-
Identifying LO	44 (67)	21 (31)	2 (3)	-	-
Using interactive teaching	46 (69)	20 (30)	1 (1)	-	-
Integrated teaching	39 (58)	21 (31)	7 (10)	-	-
Case-based learning	44 (67)	17 (25)	6 (9)	-	-
PBL	44 (67)	18 (27)	5 (7)	-	-
OMP	31 (46)	25 (37)	11 (16)	-	-
Using AV aid	44 (67)	17 (25)	6 (9)	-	-
Working in groups	44 (67)	20 (30)	3 (4)	-	-
Giving feedback	42 (63)	22 (32)	3 (4)	-	-

Table 2. Perception of Faculties on Gain in Knowledge in TL Process after the Workshop (n=67)

PBL-problem-based learning, OMP-one minute preceptor.

Similarly, as perceived by the faculties, there was gain in knowledge for majority of faculties in different assessment methods. However, 3 faculties from clinical departments were of the opinion that there was no gain in knowledge in assessment method (in preparing essay questions). No difference was found among faculties of different discipline (Table 3).

	Strongly Agree Number (%)	Agree Number (%)	Neutral Number (%)	Disagree Number (%)	Strongly Disagree Number (%)
Preparing essay questions	24 (36)	32 (48)	8 (11)	1 (1)	2 (3)
Preparing MCQ	43 (65)	23 (34)	1 (1)	-	-
Analysing MCQ	31 (46)	32 (48)	4 (6)	-	-
Structured oral questions	44 (67)	21 (32)	2 (3)	-	-
(OSCE)/OSPE	37 (55)	24 (36)	-	-	-

Table 3. Perception of Faculties on Gain in Knowledge in Assessment Methods after the Workshop (n=67)

MCQ-multiple choice question, OSCE/OSPE-objective structured clinical examination/practical examination.

Attitude of the faculties on implementation aspect of the TL and assessment methods after the workshop were shown

in Table 4. More than 90% of faculties had the attitude to practice interactive teaching and PBL. Regarding OMP, most of the faculties of the clinical departments had the attitude to implement it. Attitude to implement the assessment process discussed in the workshop was mostly present for preparing MCQs and structured oral questions for more than 90% of faculties.

Regarding TL Process	Yes Number (%)	No Number (%)
Interactive teaching	64 (96%)	3 (4%)
Integrated teaching	58 (87%)	9 (13%)
PBL	61 (91%)	6 (9%)
OMP	55 (82%)	12 (18%)
Regarding assessment process	Yes Number (%)	Yes Number (%)
Preparing essay questions	50 (75%)	17 (25%)
MCQ	65 (97%)	2 (3%)
Structured oral question	64 (96%)	3 (4%)
OSCE/OSPE	58 (87%)	9 (13%)

Table 4. Attitude of Faculties on Implementation of TL Process and Assessment Method

Faculties were asked regarding the actual teaching practice and assessment process after the workshop. More than 80% of the faculties stated that they had modified their teaching behaviour in relation to stating the LOS (learning objectives), small group presentation and using AV aid. Similarly, more than 80% had stated that already they had altered the assessment methods in relation to preparing essay questions, MCQs and structured oral questions. But, only 64% faculties stated that they have used OSCE/OSPE as assessment method (Table 5).

Altered Behaviour in Teaching	Yes Number (%)	No Number (%)
Stating learning objectives	59 (88%)	8 (12%)
Large group presentation	43 (66%)	24 (36%)
Small group learning	59 (88%)	8 (12%)
Using OMP for clinical teaching	34 (51%)	33 (49%)
Using AV aid	54 (81%)	13 (19%)
Altered Behaviour in Assessment		
Preparing essay question	55 (82%)	12 (18%)
Preparing MCQ	57 (85%)	10 (15%)
Using structured oral questions	59 (88%)	8 (12%)
Using clinical skill assessment instrument (OSCE)/OSPE	43 (64%)	24 (36%)

Table 5. Implementation of TL Methods and Assessment Methods by Faculties

Various reasons were cited by the faculties regarding non-implementation of the newer skills in their respective institutions like lack of support from the institution (64%), lack of support from other faculties in the department (34%), lack of self-motivation (13%).

Suggestions provided by the faculties in the feedback forms were analysed. Many had mentioned that workshop had changed their vision towards teaching. Majority (80%)

wanted the duration of workshop to be increased to 4 days. Few suggested to include research methodology.

Three focus group discussions were conducted among the students of 3 different semesters to know about the changes in the teaching and assessment process of the faculties. All agreed to the fact that more number of faculties were using AV aid (LCD projector), which they always did not like. According to the perception of students, noticeable change was not seen in the teaching process of faculties. Few faculties were mentioning about the learning objectives and making the class interactive. But, students were not willing to give the credit to the workshop as they had already heard about the teaching style of those teachers from their seniors.

In depth, interview was conducted for 8 facilitators separately. All facilitators had attended the workshop at MCI nodal centers and were of the opinion that they had knowledge and skill to be effective facilitators and with successive training they were improving their skill. The topics allotted to them needed to be changed after every 4 batches, so that they all would be confident to facilitate all subjects. Of them, 6 facilitators wanted to attend the advanced faculty program as they believed that would be beneficial to them. All of them opined that to bring about the required change in the education, head of the departments should be sensitised first.

DISCUSSION

Evaluation of the effectiveness of any Faculty Development Program (FDP) is crucial to provide assessment of existing programs and to yield valid recommendations for designing future programs that better address the needs of individual faculty members and the sponsoring institutions.⁹ Using Kirkpatrick’s model with four levels of program outcomes (reaction, learning, behaviour and result), evaluation of the effectiveness of the BCW in MET was done. For this reason, a gap of six months was maintained from the date of the workshop to data collection, which would have provided time to faculties to implement. Majority of the participant faculties (82%) were from government medical colleges and predominantly female faculties (75%) had attended the workshop. Of the participants, only 10% were professors. It might be due to their seniority, they were reluctant to attend the workshop. For the same reason, only 3% were above the age of 60 years. Because of self-motivation, 76% faculties had attended the workshop. Probably, MCI rules were not strict regarding attending the workshop then. Prior information was given to all the participants regarding the course fee and duration of the training. All the participant faculties were satisfied with the workshop in terms of gain in knowledge in TL process and assessment methods, which was reflected in the immediate feedback forms and in the filled in questionnaires. But, no statistical difference was found among the faculties of different disciplines. But, 3 faculties from the clinical department mentioned that there was no gain in knowledge in assessment method. More than 80% of the faculties stated that they had modified their

teaching behaviour in relation to stating the LOs, small group presentation and using AV aid.

Sarikaya O et al in their study reported that "Training Skills Course (TSC) was found to be beneficial by nearly all of the attendants, whereas faculty members working at preclinical departments found the topics on interactive teaching, demonstration, coaching and use of guides to be less useful. The reason for the same was given as that since faculty members from the preclinical fields were involved mostly in large-group lectures, they could not find these methods and techniques applicable. In accordance with this observation, the topic that was found to be effective in implementing a change in most of the faculty members' teaching activities was that for large-group presentations, an activity that is common for all faculty members.¹⁰

In the present study, most of the faculties were used to large group teaching in their respective institutions. This might be reason for them not to implement the interactive teaching methods. Attitude to implement the assessment process discussed in the workshop was mostly present for preparing MCQs and structured oral questions for more than 90% of faculties.

In "Student Assessment Instrument" Course (SAIC) as described by Sarikaya O et al, it was found to be beneficial by almost all of the attendants without a difference between clinicians and pre-clinicians and clinicians stated that they gained a greater advantage from the topics on assessment methods like the structured oral exam and OSCE presented during the course, than did faculty members from the preclinical disciplines.¹⁰ Implementation aspect was not achieved fully as evidenced from the response of the faculties and students FGD in this study. But, studies have shown improvement in the teaching and evaluation process after FDP. Also, professors who have more experience in teaching, modified their teaching practices less than their junior colleagues.¹⁰ As described by SB Ozvaries et al, six months to a year later of the faculty development program, large proportions of the participants reported using many of the training techniques in their teaching program.¹¹

Various reasons were cited by the faculties regarding non-implementation of the newer skills in their respective institutions like lack of support from the institution (64%), lack of support from other faculties in the department (34%), lack of self-motivation (13%). As described by D K Srinivas et al, "although, a large number of medical teachers were sensitised, only some have been able to implement the concepts." The impediments are lack of motivation amongst teachers as well amongst educational administrators, poor recognition and lack of reward for the work done. Motivated teachers have to fulfil their teaching and clinical commitments and in addition devote time for faculty development activities.¹² A systematic review of faculty development by Yvonne Steinart et al described the following outcomes-

- Overall satisfaction with faculty development programs was high. The methods used, especially those with a practical and skills-based focus were valued by the program participants.

- Participants reported a positive change in attitudes toward faculty development and towards teaching as a result of their involvement.
- Participants reported increased knowledge of educational concepts as well as specific teaching strategies and gains in skills such as assessing learners' needs, promoting reflection and providing feedback.
- Self-perceived changes in teaching behaviour were consistently reported.
- Participants reported a greater involvement in new educational activities and establishment of new networks of colleagues.^{5,13}

Though self-perceived change in teaching behaviour was reported by the faculties in this study, students did not agree to it. Facilitators were of the opinion that head of the departments were the key persons to bring about the required change after attending the workshop as many decisions depend on them.

For required change in the institutions, more number of faculties needed to be sensitised. Very few faculties were sensitised from each institution when this study was conducted.

BCW designed by MCI is only of 3 days duration, which sensitises the faculties to the new TL methods and assessment methods and might not be effective in bringing about the required changes.

CONCLUSION

Evaluation of the workshop revealed many encouraging facts like satisfaction of participants, their gain in knowledge in various methods of teaching and assessment. But, implementation aspect was not encouraging as it was dependent on various other factors like support from the institution, adequate infrastructure, manpower and regular monitoring. For effective change, more faculties need to attend the advanced faculty development program. Feedback from this study will help improve further workshops that will be conducted.

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