

Original Article

Impact of Revised Basic Course Workshop on Medical Educators : An Expedition of NMC Mandate to Formal Praxis !!!

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Background : Kirkpatrick's model is one of the suitable methods for assessing educational programs at different levels. The present study is planned to evaluate the impact of the Revised Basic Course Workshop (rBCW) on medical educators.

Aims and Objectives : (1) To evaluate the effects of rBCW on response, knowledge, and self-perceived behavior of faculties as per Kirkpatrick's program evaluation model. (2) To identify the perceived challenges and suggest solutions to bridge the gap.

Materials and Methods : An educational intervention was carried out among 28 faculties through the Faculty Development Program followed by a structured follow-up questionnaire. The data was analyzed in terms of percentage, proportions, paired t-test and thematic analysis.

Result : The majority (71.4%) were male with a mean age of 36.21 years. All faculties were satisfied, 86.4% either agreed or strongly agreed with quality. Thematic analysis of reflections by participants highlighted a few important aspects of medical education system in terms of themes & subthemes. The increase in knowledge was evaluated by pre and post-test, which was found to be statistically significant ($P < 0.05$). The behavior change was perceived positively by the participants. A few challenges were encountered like pandemic effects, lack of motivation & co-ordination, mismatched resources for which the suggested solutions were refresher training, more aligned resources, etc.

Conclusion : All the faculties were satisfied with an increased knowledge & positive change in behavior after rBCW. Yet, it was perceived as inadequate in terms of various challenges during implementation which necessitated the need for the implementation of suggested solutions.

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Key words : Revised Basic Course Workshop, Kirkpatrick's Programme evaluation, Faculty Development Programme, Feedback, Competency-based Medical Education, National Medical Commission, Indian Medical Graduate.

Faculty Development Programme (FDP) is a focused term that covers a range of activities designed to improve student learning and to help faculty improve their competence as teachers (Eble & McKeachie, 1985)¹.

FDPs are an important aspect of medical education and in the efficient delivery of medical curriculum, however, it has been subjected to major changes recently in the context of the new Competency-based Medical Education (CBME) curriculum. There is a large gap between the demand for medical education training and the supply of resources especially trained faculties in South East Asia regions, the regulatory medical councils thus recommend FDP to enhance the quality of medical education².

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Editor's Comment :

■ rBCW is mandatory as per NMC. Although it is evaluated, it does not go beyond level 2 of Kirkpatrick's Programme evaluation model. For successful implementation and effective outcome, we need to go beyond level 2 in terms of self, peer assessment, and an independent system to observe the behavior change in the long run through an observational checklist to bring the intended outcome and create the impact through rBCW in the medical education system.

India has adopted outcome-based medical education and has rolled out CBME from the year 2019 with a goal of Indian Medical Graduates (IMG) as the output³.

FDP for medical teachers started long back as the National Teacher's Training Centre (NTTC), however, the 1997 regulations and further 2009 GMER guidelines made medical education Units/ Departments in Colleges and Medical Education Training for each faculty a mandate. This in turn necessitated the establishment of various regional, nodal centres along with Advanced Courses in Medical Education (ACME), Fellowship in Foundation

for Advancement of International Medical Education and Research (FAIMER) courses. Although the CBME curriculum has provided all the competencies, there was a need to prepare the faculties for the sudden change in the medical education system^{4,5}.

The basic level faculty training was named Basic Medical Education Technology Workshop (BMET) which had a three-day intensive training format. Later this was renamed as a revised Basic Medical Education Technology Workshop (rBMET) with a revised curriculum aligned to CBME. In 2014, MCI introduced an ACME course delivered through regional and nodal centers. Later from 2019 onwards Curriculum Implementation Support Program Workshops (CISPWs) were rolled out to orient the faculties to the changes in the curriculum. Recently in 2023, the rBMET became BCME, with various reforms. Faculty Development Program planning and implementation is crucial and critical at the same time. A systematic approach can help, however, a longitudinal program, instead of a cross-sectional bolus will be more impactful. Direct observation of teaching and giving feedback will help in the true acquisition of teaching competencies and the faculty can appreciate their progress from novice level to expert level in implementing different components of CBME⁶⁻⁸.

Kirkpatrick's model is one of the suitable methods for assessing educational programs such as a Faculty Development Program at four levels- response, learning, change in behavior & impact of training. It provides one technique for appraisal of the evidence for any reported training program and could be used to evaluate whether a training program is likely to meet the needs and requirements of both the organization implementing the training and the staff who will participate⁹.

The present study is planned to evaluate the impact of FDP ie, Revised Basic Course Workshop on Medical educators.

AIMS AND OBJECTIVES

(1) To evaluate the effects of rBCW on response, knowledge, and self-perceived behavior of faculties as per Kirkpatrick's program evaluation model.

(2) To identify the perceived challenges and suggest solutions to bridge the gap.

MATERIALS AND METHODS

An educational Intervention was carried out in a Tertiary Health Care Institution for a 6-month duration, among a total of 28 participants who were faculties of various Departments enrolled in rBCW and gave their consent. The study duration was 6 months.

Ethical approval was taken from the Institutional Ethical Committee (20/IEC/GEMS&H/2021). The data was collected through a pre-designed, pre-validated questionnaire which included a pre-post-test, and a feedback survey, along with the reflections by participants' postworkshop. A follow-up questionnaire was circulated online after 6 months of the workshop to analyze the self-perceived change of behavior & to identify the challenges along with solutions to address them. The follow-up questionnaire consisted of demographic details, practice of concepts learned during rBCW with evidence in the last 6 months, change in teaching/learning style & open-ended questions for challenges and possible solutions.

The pre & post test, feedback & follow-up questionnaire were prepared and validated by Medical Education Experts. After getting ethical approval, the faculties were approached for rBCW enrolment. Out of 30, only 28 showed up and attended both the sessions (morning & afternoon) on all the 3 days of the workshop, thus included in the study. To measure the learning pre-test was conducted at the beginning and a post-test at the end of the workshop to evaluate the improvement in knowledge. Likewise, a feedback survey form was circulated among all the participants to measure their perception of the program. The participants were then instructed to write up their reflections in brief based on Rolfe's reflective model and submit them within 2 days via WhatsApp in Microsoft Word format. After 6 months of the workshop, a follow-up online questionnaire was shared with them to fill along with a request to attach the evidence wherever necessary.

The quantitative data thus collected was summarised in the form of Percentage, Mean and Standard Deviation. Students paired t-test was used to assess the difference between the mean knowledge scores of the participants before and after the intervention. Thematic analysis was done for the qualitative data obtained from the feedback survey, reflections & open-ended questions in the follow-up questionnaire.

RESULTS

Out of all participants 71.4% were male. The mean age of the study population was 36.21 years. The majority (78%) belonged to clinical subjects followed by para-clinical & pre-clinical subject faculties. Likewise majority (57.14%) were assistant professors followed by Associate Professors and Professors.

The FDP (RBCW) was evaluated at various levels based on Kirkpatrick's program evaluation model (Fig 1). Level-1: reaction through a feedback survey,

level-2: learning through a pre & post-test analysis, level-3 (partially): behavior change through a follow-up questionnaire and level-4: Impact which was not included in the current research.

Reaction to the program was evaluated through feedback analysis of the participants at the end of rBCW along with the reflective writings of participants. All the faculties were satisfied with the Workshop and 86.4% perceived it useful in the context of the current Medical Education System. The majority either agreed or strongly agreed with the appropriateness of content (92%) of the workshop, adequacy of pace (86%), appropriate presentation style (82%), adequacy of time (64%), and use of interactive T/L methods (79%) during the sessions of the workshop (Fig 2).

The qualitative data obtained from the feedback survey summed up with a few verbatim by the participants which are mentioned below:

- Needed more time for the AETCOM session, it was not sufficient.
- Need revision of the given schedule for rBCW as per the need!
- Inclusion of more concepts and more breaks in between sessions.
- Handouts or pre-reading materials could be made available.

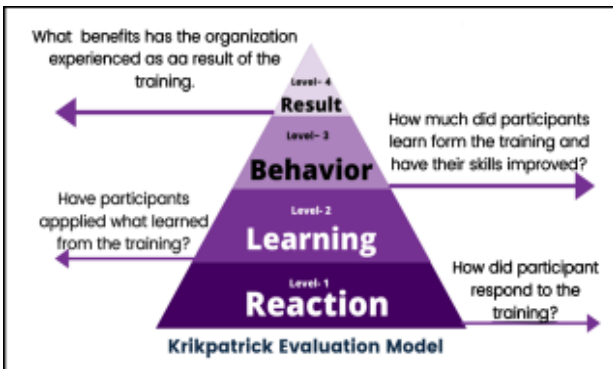


Fig 1 — Kirkpatrick Evaluation model

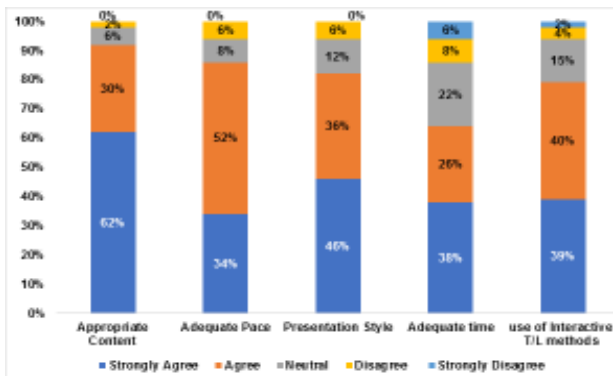


Fig 2 — Level-1 Reaction: Feedback of the participants towards the FDP (RBCW)

- A shorter duration of sessions and more group activities are required.

The learning of the participants was measured using a pre-test, before and post-test, after the intervention consisting of 10 MCQs based on the content of the workshop. Thus, the knowledge gain was evaluated by comparing pre and post-test scores through paired t-tests, which was found to be statistically significant ($P < 0.05$) (Fig 3).

The change in behavior in level 3 was measured partially through a self-perceived online follow-up questionnaire through a Google survey form, with the provision of the required evidence to be uploaded, wherever needed. This was a simple and easy way to keep a check on the progress of the participants by self-observation. However, complete evaluation at level 3 was a difficult task in terms of the unavailability of a uniform observational checklist for the same along with possible subjective bias of the observers. Analysis of the responses to the follow-up questionnaire showed a positive self-perceived change in behavior among the participants in terms of the practice of the concepts learned during FDP in real-time (Table 1).

The qualitative data received from open-ended questions in the follow-up questionnaire was analyzed by thematic analysis. A few important themes emerged under challenges encountered while practicing concepts taught during rBCW and possible solutions to overcome them (Fig 4).

The thematic analysis of the reflections by the study participants unveiled a few pertinent themes and sub-themes under each category of what happened, so what & what next related to rBCW (Table 2)

DISCUSSION

The current study observed that all of the participants were satisfied with the workshop & perceived it useful in the context of the current Medical Education System. Likewise, another study by Heydari, *et al* concluded that the workshop on new teaching

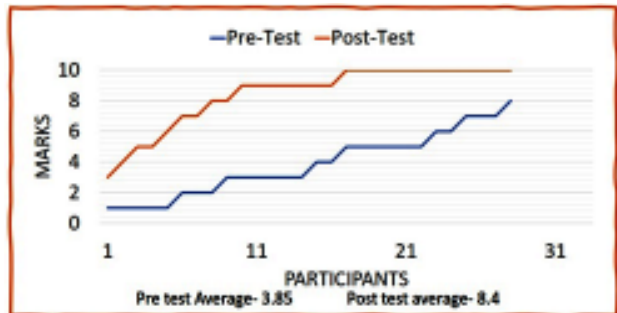


Fig 3 — Level-2 Pre & Post Test Analysis

Table 1 — Self-Perceived Practice of Concepts Learned in RBCW (N=28)

Practice of Concepts	Percentage	Frequency
Group Dynamics	71.4%	20
Framed LOs	60.7%	17
Adult Learning	75%	21
Interactive teaching in Large Group	42.8%	12
Interactive teaching in Small Group	67.8%	19
Framed structured theory questions	64.2%	18
Integrated teaching	57.1%	16
Self-Directed Learning sessions	53.6%	15
New assessment methods for skill	53.6%	15
Seek Feedback	46.4%	13
Gave Feedback	86%	24
E-Learning session	82.1%	23
AETCOM session	57.1%	16
Prepared lesson plan	64.2%	18
Planned elective course	42.8%	12

and learning methods significantly improved the satisfaction, knowledge and behavior of healthcare staff¹⁰.

The learning of the participants after rBCW showed significant improvement in terms of increased test scores and increased awareness towards various terminologies, tools & technology related to CBME for producing a competent Indian Medical Graduate. However current study emphasized self-perceived behavior change in terms of an online follow-up questionnaire with the provision of evidence, wherever needed, through self-observation. Similar studies like in Dorri et al. it was found that CPR in-service training had a favorable effect on all four levels of the Kirkpatrick model for nurses and nurse's aides. However, they found behavior levels more challenging and sensitive attributed to the right opportunity to change behaviors, the unpredictability of required time for a change of behavior, the appropriate working environment for any change, etc¹¹.

The present study aimed to evaluate the effectiveness of a training program following

Kirkpatrick's four-level model, however evaluation of the 4th level was not attempted for various reasons like time constraints, limited resources and lack of standardized outcome indicators. Similarly, studies have highlighted the challenges of evaluation of a training program at 4th level. It was concluded that creating long-term positive changes requires repetition and the utilization of multiple educational strategies through a longitudinal study¹².

The present study highlighted challenges to the implementation of CBME concepts after the rBCW such as pandemic effects, unawareness, lack of motivation among faculties, mismatched resources, lack of coordination between various departments, improper planning & execution & unavailability of any existing system for reward or reinforcement, lost to follow up of faculties pertaining change of institution, etc. Likewise, solutions offered were refresher training every year, student involvement in planning, more aligned resources (4M) as per demand, inter-departmental collaborations, strategies for regular follow-ups, ensuring quality, increasing accountability, Effective feedback system. Similar challenges were encountered by medical educators for implementation of CBME which were suggested to be tackled by incremental changes to the old curriculum rather than the overhaul revision, more faculty input, appropriate pace of training & adequate time for preparation¹³.

The immediate impact of RBCW was good in enhancing the knowledge of participants; however, periodic vigilance and frequent refresher training are required to ensure proper implementation of the fundamentals of rBCW by trained teachers¹⁴.

It might be premature to add, but this may be an appropriate time to create a Resource Centre for Faculty Development which might function as a focal center for educational innovations and reforms. Medical Council of India, now the National Medical

Table 2 — Thematic Analysis of Reflections by Participants

Categories	Themes	Sub Themes
What Happened?	Teamwork	Group activities Sharing opinions
	Adult learning.	CBME curriculum highlights Clarity on new T/L & assessment methods Interaction
So What?	Knowledge	Confidence Communication Support
	Satisfaction	Learning new teaching competencies
What Next?	CBME Implementation	Practicing new techniques Educational Research
	Competent teacher	Higher courses in ME Leadership skill Collaborations

Commission as the regulator of Medical Education in India, has taken this unique step to add science to the art of teaching. Although it's worth a try to restructure Medical Education, its relevance in the long term as an art should not be undermined through micromanagement. Moreover, an established system must be there to evaluate change at all levels and apprise accordingly. Initial results of FDPs are encouraging and so we must continue our efforts, particularly for the Colleges that are newly established. Motivated faculties

needed routine improvisation in FDP curriculum as per the advancing technology and current trends in medical education. However, the frequent changes may create confusion among faculties. A longer period might be needed to see the impact of FDPs on medical education and thereby better health status of the population¹⁵.

CONCLUSION

All the faculties were satisfied. An increase in knowledge & positive behavior change was observed after the Revised Basic Course Workshop. Yet, it was perceived as inadequate in terms of various challenges during implementation which necessitated the need for the suggested solutions.

Recommendations :

- (1) Availability of a standardized observational checklist for evaluating behavior change.
- (2) Effective system for 360-degree feedback by multiple sources.
- (3) Establishing learning & developmental portfolios for faculties.
- (4) Provision of flexibility to both trainers & trainees as per the need and context.
- (5) Establishment of the continuum of support to each medical educator.

Limitations :

A small sample size was selected and it was not possible to measure the 4th-level results as per Kirkpatrick's model of Programme evaluation attributed to time constraints.

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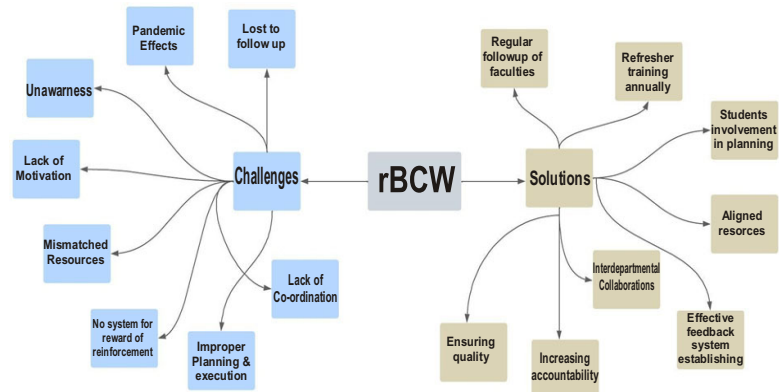


Fig 4 — Challenges & Solutions to practice CBME concepts learned in rBCW

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