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Initial Days of Revised Basic Course Workshop in Medical Education in India: An End-training Analysis

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ABSTRACT

Introduction: Indian Medical-education is undergoing transformation. Faculty-development workshop is revised across nation. One of the first such batches was assessed.

Methodology: All 26 participants of rBCW from various departments and of different cadres from tertiary-care-teaching-hospital filled up end-training-questionnaire about their general perceptions, course-content and recommendations. Paired t-test and percentages were calculated.

Results: 73.1% faculties were assistant professors or seniors, mean age being 35.5 years. Everyone had experience of undergraduate teaching with varying degree of exposure to MET. Significant increase in motivational level and confidence was seen. Awareness was lowest about competency-based teaching. Affective domain was neglected. Only 23% participants put in some thought behind their academic work. Majority agreed on personal utility of workshop. 84.6% wanted IMG to be only a clinician. Introduction of students' feedback, assessment pattern change, were widely suggested areas. Perceived academic challenges and solutions were mainly human resource, infrastructure and workload.

Discussion: Changes in curriculum and consistent emphasis on affective domain and competency-based-education needed. Hand-holding of young faculties, feedback from students and parents, changes in students' assessment pattern are need of hour. IMG roles need to be disseminated amongst faculties clearly. Provision of conducive atmosphere for faculties and assessment-based-employment - are the way forward.

Keywords: Medical education technology, revised basic course, perceptions, feedback

INTRODUCTION

Teaching is a demanding and complex task. George Miller observed, "It is curious that so many of our most important responsibilities are undertaken without significant preparation. Marriage, parenthood and teaching (in medical schools) are probably most ubiquitous illustrations". [1] It is necessary for the present day teacher to be aware of and become part of far reaching changes that are taking place in medical education. [2] Medical students need to be effective life-long learners. Application of adult learning principles, student autonomy, self-learning, experiential learning, reflective learning, computer-assisted learning, distance learning, e- learning, use of skill-learning laboratories are some of the areas requiring expertise, which are not readily available with most teachers. [3] Little attention is paid during medical education to the medical and public health needs of the population. [4] Bhore Committee recognized the

need for training of medical teachers as early as in 1946 and made recommendations. Nearly, three decades later, efforts towards this began through medical education units in every medical college. [3] The main activities of MEU were to conduct workshops for faculties in medical education technology. The frequently covered topics were teaching–learning, media and student assessment. [5]

Several bottlenecks have been reported in Indian medical education system. Inspections of colleges carried out by Medical Council of India (MCI) focus mainly on quantity over quality. There is hardly any interaction between inspectors and faculty, students, parents or patients to find out academic achievements and quality of care. [3] At present, there is no uniformity in the standard of medical education across the country. [6] To achieve higher standards of medical education, redesigning of curricula with stricter implementation and improved assessment methodologies is required. [7]

MCI has revised conventional BCW into rBCW and has made it more competency-based along with inclusion of ATCOM (Attitude and Communication) module. Implementation of rBCW is still in nascent phases and hardly a few batches are covered across the nation. Early observations made from such initial experiences are vital for future policy changes. Medical Education Unit of AMC-MET Medical College, Ahmedabad carried out its first batch of rBCW in September 2016. The current study was carried out to assess perceptions of participant faculties and to draw experience-based observations.

METHODS

Study population: All 26 participants registered for first batch of rBCW in Medical Education Technology belonging to various clinical/para-clinical/non-clinical departments of AMC MET Medical College & LG Hospital, Ahmedabad, designation of these participants were Assistant Professor or higher.

Study duration: At the end of 3 days of workshop, participants were asked to fill in their opinions in given questionnaire.

Inclusion/exclusion criteria: All the participants of rBCW were included while workshop-organizing faculties were excluded from the study.

Study tool and design: It was a cross-sectional study. A pre-designed, pre-tested, 23-articles questionnaire with a mix of MCQs, Likert's scale-based questions [8] and some open-ended questions was provided to all participants to fill up at the end of workshop on 3rd day. Study tool included questions pertaining to participant's perception before and after training, course content and future recommendations.

Analysis: Collected information was entered in appropriate statistical program/software. Analysis was done for each study item. Paired t-test and percentages were calculated wherever suitable.

Confidentiality and anonymity of the participants was maintained throughout the process.

RESULTS

Participants belonged to various clinical and non-clinical departments and 73.1% of them were of assistant professor cadre. Male-female ratio of participants was almost the same. [Table 1]

Table 1 – Profile of rBCW participants

Respondent profile	Number (n=26) (%)
Designation	
Assistant Professor	19 (73.1)
Associate Professor	4 (15.4)
Professor	3 (11.5)
Gender	
Male	14 (53.8)
Female	12 (46.2)
Academic Experience of UG (IMG) teaching (years)	
<5	17 (65)
≥5	9 (35)
Academic Experience of PG teaching (years)	
<5	9 (64*)
≥5	5 (36*)
Mean age	35.5 ± 8.4 years

(*n=14)

Table 2 – Participants' exposure to previous Basic Course Workshop in Medical Education technology

Participants' exposure to BCW	Number (n=26) (%)
Previous exposure of participant to BCW	
Trained in BCW	11 (42.3)
Not trained in BCW	14 (53.8)
Did not answer	1 (3.8)
Time elapsed since last exposure to BCW (years)	
< 3	0 (0)*
3 to 5	4 (36.4)*
> 5	7 (63.6)*
Frequency of previous BCW exposure	
Once	6 (54.5)*
Twice	3 (27.3)*
Thrice	2 (18.2)*

(*n=11)

Mean age of participants was 35.5 ± 8.4 years. [Table 1]

Table 3 – Participants' current practices in medical education (n=26)

Participants' current practices	Number(%)
Routinely followed academic style during personal teaching	
Integrated curriculum	6 (23.1)
Problem-based learning	6 (23.1)
Subject-based learning	8 (30.8)
Competency-based learning	1 (3.8)
Hybrid pattern	5 (19.2)
When participant consciously thought about various domains and nitty-gritty of educational methods	
While preparing T-L content	3 (11.5)
While delivering T-L content	6 (23.1)
Both while preparing & delivering T-L	5 (19.2)
Never	11 (42.3)
Did not answer	1 (3.8)
Domain that according to participants, needed a better addressal in their current T-L methods	
Affective	6 (23.1)
Psychomotor	5 (19.2)
Cognitive	2 (7.7)
All of the above	12 (46.2)
Did not answer	1 (3.8)

Table 4 – Participants' perceptions on roles of an IMG and felt needs in medical education (n=26)

Role perceptions and felt needs for an IMG	Number (%)
Ideal role of an IMG at the end of internship according to participants	
As clinician	22 (84.6)*
As leader	15 (57.7)*
As member of health care team & system	16 (61.5)*
As communicator	18 (69.2)*
As lifelong learner	22 (84.6)*
As professional	12 (46.2)*
Perceptions of participants on which students would benefit the maximum by their improved T-L methods	
Toppers	0 (0)
Average students	8 (30.8)
Below average students	3 (11.5)
All students	11 (42.3)
Undecided	4 (15.4)
Felt need for introducing students' feedback	
Yes	24 (92.3)
No	2 (7.7)
Felt need for introducing parents' feedback	
Yes	10 (38.5)
No	15 (57.7)
Did not want to answer	1 (3.8)
Felt need for more MET workshops	
Yes	19 (73.1)
No	5 (19.2)
Did not want to answer	2 (7.7)
Felt need for faculty assessment by employer/MCI	
Yes	19 (73.1)
No	5 (19.2)
Did not want to answer	2 (7.7)

**Multiple responses were allowed*

All 26 participants had experience of undergraduate teaching ranging from 1 to 20 years (mean experience being 5.9 ± 6.8 years, CI 3 to 8.6), while 13 participants had experience of teaching post-graduates as well (mean experience being 5.7 ± 6.8 years, CI 1.6 to 9.7). Cumulative teaching experience of all participants was 152 years and 73.5 years for under-graduates and post-graduates respectively. [Table 1]

More than half (53.8%) of the participants were not trained ever for medical education technology. Eleven out of 26 had undergone Basic Medical Education Workshop. Majority of them (63.6%) were trained for that before 5 years or more and more than half of them (54.5%) had undertaken basic workshop only once. [Table 2]

Motivation levels of participants were assessed on a Ten-point Likert scale before and after the workshop in context of medical education. Mean motivation scores before and after training were 4.1 ± 2.3 (95% CI 3.2 to 5) and 7.3 ± 2.2 (95% CI 6.42 to 8.2) respectively, gain in the score being 78.1%. The two-tailed P value was< 0.0001 which was highly significant. (t = 6.306 with df=25, CI 2.176 to 4.286) [Chart I]

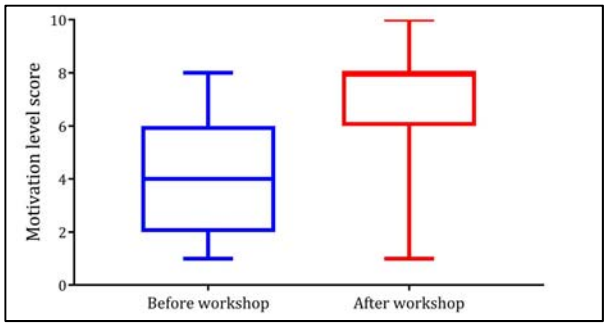


Chart 1: Motivation Levels of participants – before and after the workshop (based on 10 point Likert scale)

At the end of the training, participants were asked to self-assess their improvement and also their confidence of putting learned things into practice, on a Likert scale of 1 to 10. Largely participants felt strong improvement in their personal T-L methods and mean score for improvement was 7 ± 2.46. They were also confident to put the learned things into practice and the mean score for that was 7.2 ± 2.2.

Academic style that was followed routinely by the participants was either subject-based (30.8%) or problem-based (23.1%) or based on integrated curriculum (23.1%). Only one participant was aware about competency-based teaching style. [Table 3]

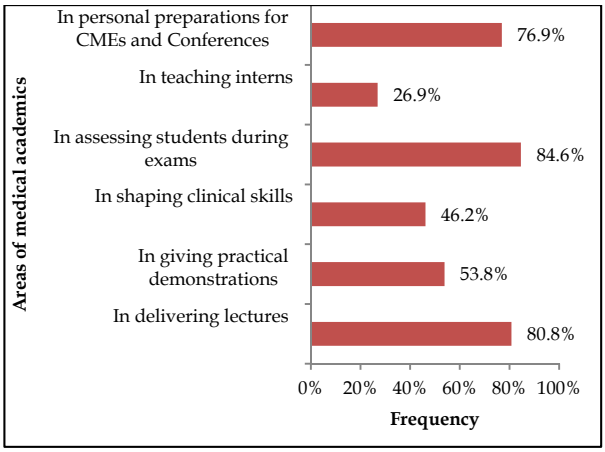
As many as 42.3% of participants, in their stint with medical education, never thought about nitty-gritty of educational methods or which domains they were addressing to. It was followed by 23.1% of participants who put in some thought about these details but that happened while delivering their teaching-learning content. [Table 3]

Almost half of the participants (46.2%) agreed that all the domains of teaching-learning i.e. cognitive, psychomotor and affective needed to be addressed better in their own practices. It was perceived by 23.1% participants that affective was the domain that needed better addressal than others. [Table 3]

Participants were asked for their views on where the current workshop could benefit them. 84.6% thought that they were better able to assess students during exams. This was followed by 80.8% and 53.8% participants believing it could help them in delivering their theory lectures and practical demonstrations respectively. As many as 76.9% believed that the learned things of rBCW could help them prepare better for the CMEs and conferences they attended. [Chart II]

As per Vision 2015, MCI has enumerated six roles of an IMG. Participants were asked about their perceptions on roles of an IMG. Majority of them (84.6%) were of the opinion that at the end of internship, s/he should be a clinician and a life-long learner. 69.2% participants opined that an IMG should be a good communicator too. [Table 4]

While 42.3% participants felt that all types of medical students would benefit with improved T-L methods, 30.8% suggested that these methods could benefit only average students. [Table 4]



(*Multiple responses were allowed)

Chart 2 - Participants' perceptions on areas of medical academics where current workshop could benefit

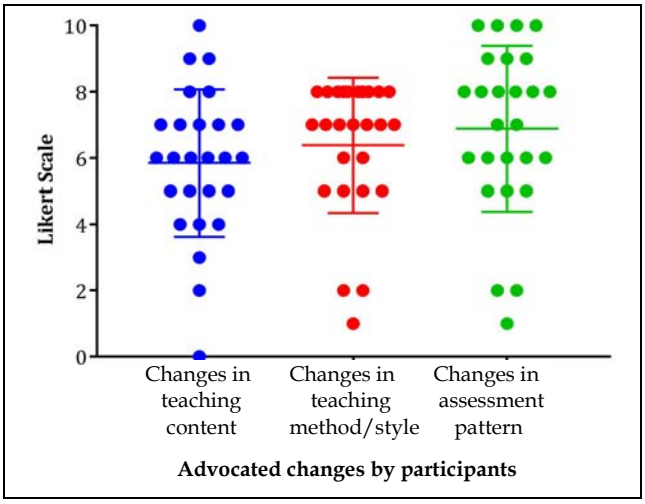


Chart 3: Changes advocated by participants for achieving roles of IMG (based on 10-point Likert scale)

Table 5 – Perceptions of participants on challenges and solutions in implementing learnings of rBCW

Challenges and possible solutions	Number (n=26) (%)*
Challenges in implementing learnings of rBCW	
Lack of human resources, time and existing workload	25 (96.2)
Hierarchical, administrative and infrastructure-related issues	13 (50.0)
Lack of commitment from students or extremely high expectations of students, communication difficulties on part of teacher	3 (11.5)
Constraints in using technology for teaching	2 (7.7)
Lack of motivation and constraints in communication on part of faculties	2 (7.7)
Difficulty in assessing newer methods	1 (3.8)
Solutions advocated by participants to overcome the challenges	
Administrative and infrastructure support	24 (92.3)
Autonomy and freedom to faculties	22 (84.6)
Periodic motivation of faculties	3 (11.5)
Segregated timeline for clinical and academic activities	8 (30.8)
Faculty assessment and use of it in promotions	7 (26.9)
Alignment of IMG syllabus with demands of entrance exams	4 (15.4)

(*Multiple responses were allowed)

Participants were asked about various needs of medical education that were necessary to prepare an ideal IMG according to them. Introduction of students' feedback (92.3%), organization of more MET workshops (73.1%) and introduction of faculty's own assessment (73.1%) were the predominant felt needs. The group was divided on introduction of parents' feedback. [Table 4]

Participants were asked to rate the changes they would advocate in medical education on 1 to 10 Points-Likert scale. Mean scores for changes in teaching content, in teaching style and in assessment pattern were respectively 5.9 ± 2.2 (CI 4.9 to 6.7), 6.4 ± 2.2 (CI 5.6 to 7.2) and 6.9 ± 2.5 (CI 5.9 to 7.9). [Chart III]

Faculties were also asked open-ended questions on challenges they perceived in implementing the learnings of rBCW. They were also asked for their suggestions to overcome these challenges. Qualitative analysis of these questions yielded in answers and opinions. They were grouped, coded and analyzed as per Table 5. Biggest perceived challenges were lack of human resource, time constraints and already existing heavy workload in departments (96.2%), followed by hierarchical, administrative and infrastructure-related issues (50%) and mismatch between faculty and students exchange of knowledge (11.5%). Common suggestions to overcome challenges were improvement in administrative and infrastructure support (92.3%), provision of autonomy and freedom to faculties to implement the learned things of MET workshops (84.6%) and provision of specific academic time from routine clinical or departmental activities (30.8%). [Table 5]

DISCUSSION

Participants of our study were largely young and relatively fresh recruits with mean age around 35 years. All had experience of undergraduate medical teaching if not postgraduate. More than half of the participants were not even trained once in medical education technology and more than half of those who were trained in BCW earlier were trained before 5 years or more. rBCW implementation has started only recently in 2014 across the nation and it started at RTCs and Nodal Centers. Current one was one of the first batches undergoing rBCW under local MEU body and hence the impressions and perceptions of the study population become very important to assess.

A statistically highly significant surge in the motivation levels of participants was seen after the workshop which was in sync with the study by Rossetti et al. [9] Likert scale of around 7 was consistently achieved for self-assessed improvement levels and confidence boost. Collectively, this auger well for the future need and relevance of rBCW.

Srinivas DK et al in their study noted that while many medical schools abroad were offering innovative curricula, in India still traditional 'subject-based curriculum' was followed. [3] In present study too, before the workshop, routinely followed educational style was largely subject-based. Only one participant was aware about competency-based education which is actually the way forward through rBCWs. It is necessary for the contemporary medical teacher to be aware of and become a part of changes and the shift from conventional to innovative curriculum models and teaching methods. [2, 10]

In any discipline in India, a teaching faculty has to undergo a mandatory training in formal schools or colleges of education to be eligible not only for appointment as a teacher but also for promotion afterwards. For medical academics, there is no such requirement. [3] As a result, the doctor is inherently considered a born-teacher without any knowledge or sensitization about the art of teaching. Almost half of the participants in our study personally admitted to this ignorance of nitty-gritty of teaching. Very few (less than 1/4th) of the faculties actually admitted to put in some thought about various domains of teaching-learning. However, this was limited to only theory lectures and not during practical.

Competency-based education with a renewed focus on affective domain is the major shift from BCW to rBCW. At the beginning of the workshop, a very few (less than 1/4th) of our respondents actually identified affective domain as the area of emphasis. The findings reinforce the need to get all medical teachers trained under rBCW as soon as possible.

rBCW is aimed at comprehensive capacity building of medical teachers that not only enables them in teaching and assessing students in better way but also in their own development as a faculty that updates himself with all recent advances by attending various CMEs, conferences, etc. More than 80% of the study subjects agreed that the workshop helped them achieve these goals which was in agreement with the findings of an African study. [11]

About 1/3rd of participants had reservations that the current learnings of rBCW when implemented, would benefit only the average-performing students to perform better, it may not make much difference to the students on the extreme side of performance-spectrum. Issues like these need to be addressed in subsequent rBCWs and necessary changes are to be made in the course content as

well that can make the program comprehensive so as to address the need of every medical student.

MCI envisages an IMG to be a clinician, a leader, a member of healthcare team, a good communicator, a lifelong learner and a professional at the end of his internship. Purpose of rBCW is to achieve this ultimate objective. Even after training, majority of participants were of the opinion that at the end of internship, an IMG should only be a clinician and a life-long learner. While more than 60% agreed for the need of him being a communicator too, the proportion is still not adequate. [12]

Suggestions for improvement in current educational system were sought. Almost everyone advocated for introduction of students' feedback in regular teaching-learning while almost 3/4th of the respondents advocated for repeat of MET workshops like rBCW. The study group was divided on introduction of parents' feedback in existing system.

Efforts for training of medical teachers started as many as 30 years after the Bhore Committee recognized the need in 1946 and made such recommendations. [3] The present system of recognition of a medical college by MCI focuses mainly on number of teachers, building, infrastructure and other facilities which are not the measures related to quality of medical education. There is hardly any interaction between inspectors and faculty, students, parents or patients to find out academic achievements and quality of care. [3] Quality of teaching has never been a criterion for any employment-related issue in medical education. One of the surest ways to ensure this quality is introduction of qualitative assessment of a medical faculty. [13] In our study, introduction of faculty's assessment was supported by almost 3/4th of the subjects which is a positive sign. Changes in assessment pattern, teaching style and content were strongly advocated, in that order.

Compilation of challenges faced by the faculties was in line with the findings of Srinivas DK et al and Hegde P. [3, 14] Biggest challenges were either material or non-material i.e. infrastructure issues, extreme existing workload and time constraints. Hierarchical and administrative bottlenecks were also widely reported by the respondents. Suggestions to combat these challenges comprised of providing more autonomy and freedom to the young faculties for implementation of new techniques, laying down segregated timelines for departmental/clinical work and academic work, etc. The findings were in alignment with findings of a multi-centric study by Adkoli B V and Sood Rita about strengths and weaknesses of existing medical education in India. [5, 15] It was also in sync with our findings where respondents had predominantly highlighted the need for administrative support to implement their learning of rBCW.

RECOMMENDATIONS

BCW has been re-designed into rBCW with its core areas intact and more focus now is on affective domain and competency-based education. These are still early days in implementation of rBCW across India so these initial results from such studies need to be carefully analyzed and looked into.

For a faculty, motivation sustenance is a key factor that can be addressed by such workshops. Continuous hand-holding of trained faculties and reinforcement of learned things through such workshops are necessary. [16]

Junior faculties can be a huge asset in the agenda of improving medical education. Their specific training needs and feedbacks need to be addressed carefully. Current MCI directives are to train cadres of only assistant professors or above. Junior Lecturers (Tutors) are often the primary contacts with students during academic schedules and should be included in such workshops.

Systematic and continuous analysis of feedback given by participants in every rBCW is imperative across the nation. For example, in current workshop, respondents felt that the knowledge of rBCW will help only average-performing students and not the toppers or the poor-performing students. Reasons need to be explored behind such rationale and corrections in content, methods and messages should be made for all subsequent workshops.

Roles of an IMG as envisaged by MCI are multiple and not only confined to being a clinician. Concerted efforts need to be made for widespread understanding of these roles amongst faculties.

Brainstorming over introduction of students' feedback and faculty assessment should be carried out at all levels in order to implement them. They can be incorporated in MCI inspections and career advancements. This can resonate amongst the medical teachers as strongest incentive and motivation to adapt to the newer methods of teaching-leaning in medical education. Whilst most of the focus still remain on teaching-learning methods, changes in assessment patterns are the need of hour.

Infrastructure issues, extreme existing workload, time constraints, hierarchical and administrative bottlenecks, etc. still remain widespread obstacles. Each challenge must be identified and tackled from the highest levels in order to provide a conducive environment for all the changes in medical education.

Study limitation

As per directives of MCI, rBCW has started only from 2014 and all RTCs and Nodal centers of MCI started implementing it initially. Local MEUs of medical colleges could implement it later. Current study was the first such batch of rBCW in the institute. Early observations always have strong monitoring and evaluation value hence the study has been carried out with single batch. Also, MCI directs to not go for more than 30 participants per batch during such course in order to make the workshop proceedings more interactive hence the limited number of participants in current study.

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