Original Article

The Practice and Faculties Perception of Challenges on Implementing AETCOM Session : A Mixed Method Study

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Background: CBME curriculum has been made implemented since 2019 entrant batch. Since then as an integral part of CBME curriculum, AETCOM training has also been commenced throughout India in all Medical Colleges, with the NMC published AETCOM booklet as the guiding module for AETCOM training. But, so far the literature has been searched, faculties feedback on AETCOM teaching and assessment, not much explored.

Aims and Objectives: (1) To explore the teaching learning methods as practiced, for AETCOM modules, (2) To explore the assessment methods, as practiced, for AETCOM, (3) To determine the perception of faculties, for challenges in implementing the AETCOM modules in their phase.

Materials and Methods: The faculties of Phase 1 & Phase 2 disciplines have been chosen as they have conducted AETCOM classes and assessments for at least two times besides the COVID period. After the proper administrative approval, the Head of the Department(s) and the faculties of the Phase 1 & Phase 2 disciplines have been interviewed with a prestructured questionnaire having both close ended and open ended questions. The responses of the open ended questions was recorded during interview and later on analysed thematically.

Result: All the faculties, who have been interviewed, were sensitized in faculty development programme (RBCW/BCME). While revealing the department wise practice of AETCOM teaching, it was evident that, majority of the departments has taken the responsibility of teaching AETCOM modules except one. Commonly for each modules two hours get spend to teach. Only two departments (29%) used to take the small group sessions to teach AETCOM, whereas other uses lecture sessions for teaching AETCOM. None of the department has ever attempted for any integration for teaching AETCOM. Besides the NMC mandated 5 marks theory question only 37% have practice of evaluation of reflective writing. 75% departments also assess AETCOM in practical examination either in form of separate OSCE station (42%), or, as a part of the psychomotor station in OSCE carrying AETCOM items in checklist (42%). One department (12.5%) use to assess the AETCOM of the student by global assessment in oral-viva table. Whatever checklist they use in AETCOM assessment, are usually set in and validated in departmental meeting only. In COVID times AETCOM has been assessed theory exam, online viva as well as incorporating OSCE in summative examination. Faculties perceived 'lack of willingness by all departmental faculties' 'low attendance of students', 'lack of validated SLOs', the 'difficulty in validation of checklists', 'less time for planning of OSCE stations' perceived as the challenges for AETCOM assessment.

Conclusion: Till today, when almost four years have passed since the commencement of AETCOM sessions, neither the teaching of AETCOM module nor the assessment of AETCOM is getting its proper way as was suggested in the module booklet; where the cause may be multifactorial. This study likes to explore the causes within its limitation.

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Key words: AETCOM, Assessment, Module, Challenges.

competency-based Medical Education (CBME) is being implemented across India in Medical Colleges from the 2019 entrant batch. Several new components are introduced which require focused faculty training and handholding at times. The Medical Council of India had prepared a meticulous roadmap for this and dedicated faculty development programs

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Editor's Comment :

- Aligning to directives of ongoing CBME curriculum AETCOM sessions to be taught and to be assessed to the UG medical students by all the departments.
- This present study explores that neither all the departments are practicing it in equity nor assessment is going on in equitable way. Secondly this study attempts to explore the challenges perceived by the faculties for such, so that in future it may get streamlined.

were initiated for the smooth and effective transition into CBME. For teaching AETCOM sessions the NMC (erstwhile MCI) has proposed an AETCOM module¹ where vividly the module based teaching plans are written. Alongwith the teaching learning methods, the assessment plans are also mentioned in each

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module. In Phase 1 there are five modules with dedicated 34 teaching hours, in Phase 2 there are eight modules to teach in dedicated 35 hours. For each module, the desired competencies, their level in Millar's pyramid, the case scenarios (where needed) as well as the teaching methods (eg, The exploratory large group, the small group discussion, the tag-along sessions, the panel discussions etc.) have been mentioned in detailed. In many of the modules the competencies have been set in such so that the "shows how" level has been addressed.

Now, the 2019 entrant students are in the Phase 3 MBBS. So it's quiet obvious that the faculties of Phase 1, Phase 2 MBBS have already implemented the AETCOM modules for the students and the faculties of Phase 3 MBBS are presently implementing the module for the said students. Moreover in the interim, lockdown prevailed for the COVID-19 pandemic. So it can be presumed that Phase 1 disciplines have taught & assessed AETCOM for atleast three times in full course (2019 entrant batch, 2020 entrant batch, 2021 entrant batch) whereas, the Phase 2 disciplines have taught it for two times in full course. Whatever the literatures have been searched, there the authors either worked before the proper implementation of module, or in the COVID lockdown times, when the module could not be properly implemented nationwide. Nowhere the feedback and perception of faculties, who are factually accustomed with AETCOM classes and assessment for atleast of two subsequent sessions; been found

As till date no evaluation has been done on implementation of AETCOM curriculum said programme so far has been searched in the existing literature. So this study aims to explore the existing practice of teaching and assessing AETCOM as well as the faculties' perception for challenges to implement it; in regards to Phase 1 & Phase 2 MBBS disciplines.

Research Question:

- (1) Whether the AETCOM sessions have been taught and assessed in Phase 1 & Phase 2 MBBS courses?
- (2) Whether the faculties perceives any challenges to implement the AETCOM curriculum in their respective phases, or not?

AIMS AND OBJECTIVES

Aims:

 This study aims to explore how the AETCOM sessions are being in practice for the MBBS students and secondly what are the perceived challenges by faculties to implement AETCOM sessions for MBBS students

Objectives:

- (1) To explore the teaching learning methods as practiced, for AETCOM modules, in Phase 1& Phase 2 MBBS
- (2) To explore the assessment methods, as practiced, for AETCOM in Phase 1 & Phase 2 MBBS
- (3) To determine the perception of faculties of Phase 1 & Phase 2 MBBS, for challenges in implementing the AETCOM modules in their phase

MATERIALS AND METHODS

Study Design : Exploratory- purpose based fundamental study- a mixed method study

Study Period: 06 months.

Period Required for Data Collection : Two months

Study Setting: The study has been carried on in the Institute of Post Graduate Medical Education & Research, a Government Medical College of Kolkata incepted for undergraduate admission since 2008. For data collection all the departments involved in teaching of Phase 1 & Phase 2 MBBS students were visited and faculties were approached.

Sample Size: At present academic year, disciplines of first, second and third Professor part 1 are participating in AETCOM teaching and assessment. But, excluding the COVID lockdown times, the departments of first & second Professor MBBS have already taught AETCOM for atleast two times to the students of their respective professional courses. So, the departments participating in teaching of Phase 1 & Phase 2 MBBS courses have been included in this study.

Study Population: Eight departments were visited-Anatomy, Physiology, Biochemistry, Pathology, Microbiology, Pharmacology, FMT & Community Medicine for the data collection.

Inclusion Criteria: The faculties, who provided the informed consents, will be incorporated in the project. Fortunately all of them have provided consent.

Exclusion Criteria: The clinical departments, though participates in teaching to the Phase 2 students, but, as not participates in teaching of AETCOM module for Phase 1 & Phase 2 (rather they teaches the modules for Phase 3) are not been included in this study.

Study Tool:

(1) A pre-designed, semi structured, interview schedule was used. After initial framing the

questionnaire has been validated by the MEU and CC members of the institute. The questionnaire contains five parts, as —

Part 1: General information

Part 2: Close ended questions in regards to the departmental practice of teaching AETCOM

Part 3 : Close ended questions of faculties' practice of teaching AETCOM

Part 4 : Close ended questions of practice of assessment of AETCOM

Part 5 : Open ended questions for perceived challenges to implement the class & assessment of AETCOM

(2) A smartphone of Samsung Galaxy S10 model was used for recording their responses to open ended questions

Methods of Data Collection:

As this project is a part of the course of PG Diploma ME under Dutta Meghe Institute of Medical Sciences (JNMC Wardha), so initial approval has been obtained from the respected guide. After the approval, proposal was submitted for accordance from Institutional Ethics Committee and the respective permission was obtained vide memo no IPGMER/IEC/2023/223 dt. 13/4/2023. As a necessary tool a pre-designed information collection sheet and faculty interview guide have been made and validated by the MEU faculty members of the institute.

Individual departments (Anatomy, Physiology, Biochemistry from Phase 1; Pathology, Pharmacology, Microbiology, FMT from Phase 2 & Community Medicine) were visited. The concerned Head of the Department and one faculty, who is used to take the AETCOM classes for students, as selected by HOD; were interviewed and their responses were recorded. The responses to open ended questions were recorded in Smartphone Voice Recorder system with permission from the faculty and later on analysed.

Statistics: The data collected will be checked for completeness and consistency. Collected quantitative responses were analysed in *Microsoft* excel tool-sheet to gather the result. The recorded narrations were coded in common used phrases and accordingly analysed using the concept of thematic analysis.

RESULT

Out of total 16 faculties interviewed, there were six (6) Professors, four (4) Associate Professors & six (6) Assistant Professors. All the faculties, who have been interviewed, were sensitized in Faculty Development Programme (RBCW/BCME). Out of the eight (8) departments, three departments have taken

AETCOM classes for three subsequent batches of students. Four (4) departments have taken classes AETCOM classes for two batches. One department has not yet participated in any of AETCOM classes for students (Table 1 / Fig 1, Issue 1, Q 1-3).

Departmental Practice of Teaching AETCOM:

While revealing the department wise practice of AETCOM teaching, it was evident that, Anatomy Department has taught 2 modules, Physiology Department has taught 2 modules and Biochemistry Department is used to teach one AETCOM modules for Phase 1 students. Pathology Department yet to teach any module, Microbiology Department used to teach 2 modules, Pharmacology Department used to teach one modules, Community Medicine department used to take classes on two modules and rest of the three modules are used to be taken by FMT Department. Although 28.5% respondents have told that they needed for more than 3 hours classes for one AETCOM module but majority dedicates for two hours or even less to coven one module of AETCOM. Similarly, only two departments (29%) has told that they used to take the small group sessions to teach AETCOM, whereas other uses lecture sessions for teaching AETCOM. None of the department has ever attempted for any integration for teaching AETCOM. During the COVID-19 lockdown times, faculties have taken online classes by powerpoint, to teach AETCOM (Table 1 / Fig 1, Issue 2, Q 4-8).

Faculties' Practice of Teaching AETCOM:

While collecting faculties practice on teaching AETCOM it came out that only 28.5% of them ask the students to write the reflection after the AETCOM classes. Even 7.14% has never guided students on writing reflections. Even 21% faculties never described specific learning objective from the competencies given. Only 50% faculties "often" tells the objectives in class. During the classes almost all faculties used to introduce interactivity by probing questions (100%), followed by brain storming (64%). Only 21% faculties follow the practice of arranging debates among students (Table 1 / Fig 1, Issue 3, Q 9-11).

Departmental Practice of Assessment of AETCOM:

Although all the departments assess AETCOM in both formative & summative examination in especially in format of 5-marks theory question but only 37% have practice of evaluation of reflective writing. 75% departments also assess AETCOM in practical examination either in form of separate OSCE station

Table 1								
		R	esponses	% age				
Issue 1 : Demographic distribution of the participants								
Q1	For how many years you are	03 batches	03	37.5%				
	taking AETCOM classes?	02 batches	02	25%				
	[n=8, 8 departments]	01 batch None	00 01	0 12.5%				
00	Have very undersees							
Q2	Have you undergone RBCW/BCW training?	Yes No	16 00	100% 0				
	[n=16, 16 faculties]	140						
Q3	Your designation	Prof	06	37.5%				
	[n=16, 16 faculties]	Assoc Prof	04	25%				
	O Francisco distribution of	Asst Prof	06	37.5%				
IS	Issue 2 : Frequency distribution of responses on Departmental practice of AETCOM teaching							
Q4	How many AETCOM modules	none	01	12.5%				
	have been taught in your	One module	02	25%				
	department in last two years?	Two modules	04	50%				
	[n=8, 8 departments]	Three modules More than 3 modules	01 00	12.5% 0				
05	On average how many							
Q5.	On average how many teaching hours get dedicated	01 hour 02 hours	02 02	28.5% 28.5%				
	for teaching of one module?	03 hours	01	14.2%				
	[n=7, as one dept hasn't	More than 3 hours	02	28.5%				
	taught AETCOM till date]							
Q6	What is the usual teaching	Large group, didactic lecture	00					
	learning method get followed	Large group- interactive lecture	02	28.5%				
	in teaching AETCOM?	Large group- role play						
	[n=7, as one dept hasn't	with interactive lecture	02	28.5%				
	taught AETCOM till date]	Large group- Video demonstratio with interactive lecture	n 01	14.2%				
		Small group teaching	02	28.5%				
Q7	Have the AETCOM classes	Always	00	0				
٠.	were arranged by integrating	Often	00	0				
	with other departments?	Seldom	00	0				
	[n=7, as one dept hasn't	never	07	100%				
	taught AETCOM till date]							
Q8	During COVID times how	Online PPT	02	66%				
	you taken AETCOM classes?	WhatsApp video demonstration	04	220/				
	[n=3, as only Phase 1 disciplines had students at that time]	followed by online discussion No class happened	01 00	33% 0				
	nad students at that timej	others	00	0				
	Issue 3 : Frequency distribution o							
Q9	Do you guide students for	Always	04	28.5%				
	how to write reflection?	Often	08	57.1%				
	[n=14, as one department	Seldom	01	7.14%				
	yet to teach AETCOM	never	01	7.14%				
	so two faculties excluded]							
Q10	Do you practice to narrate	Always	00	0				
	Specific Learning Objective (SLO) in all classes of AETCOM?	Often Seldom	07 04	50% 28.5%				
	[n=14, as one department yet	never	03	21.4%				
	to teach AETCOM so	110101	00	211170				
	two faculties excluded]							
Q11	0 0	Probing question	14	100%				
	make the session interactive?	Brain storming & think-pair-share		64.2%				
	(multiple option)	Ask to write reflection	03	21.4%				
	[n=14, as one department yet to teach AETCOM so	Arranging debates others	03 00	21.4% 0				
	two faculties excluded]	0.1013	00	U				
			(Contd				

(42%), or, as a part of the psychomotor station in OSCE carrying AETCOM items in checklist (42%). One department (12.5%)use to assess the AETCOM of the student by global assessment in oral-viva table. Whatever checklist they use in AETCOM assessment, are usually set in and validated in departmental meeting only. In COVID times AETCOM has been assessed theory exam, online viva as well as incorporating OSCE in summative examination (Table 1 / Fig 1, Issue 4, Q 12-17).

Faculties' Perception of Challenges to Implement AETCOM Classes & Assessment:

Lack of willingness by all departmental faculties to participate the AETCOM classes, low attendance of students, lack of validated SLOs, other institutional assignments of the faculties, difficulty in integration with other departments, whole day packed up class schedule etc. were perceived as the hindrances to implement the AETCOM classes. Even if the faculties wishes to make the AETCOM assessments, the difficulty in validation of checklists, less time for planning of OSCE stations perceived as the challenges for AETCOM assessment. Even they have mentioned that late issuing of logbook makes the effect of reflection writing less for the students (Table 2&3 / Fig 2&3).

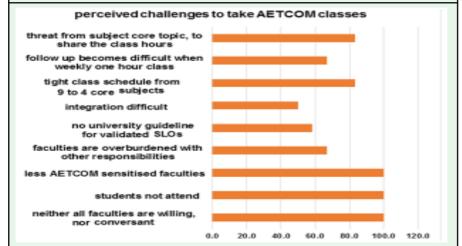
DISCUSSION

AETCOM has been mandated since 2019 entrant batch in the MBBS curriculum.

Tabl	Table 1 Contd						
		Res	sponses	% age			
Issue 4 : Frequency distribution of responses on Departmental practice of AETCOM							
assessment							
Q12	In which exam you used to	In formative assessment only	00	0			
	assess AETCOM?	In summative assessment only	00	0			
	[n=8, 8 departments]	In both	08	100%			
Q13	How you assess AETCOM	5 marks theory question	80	100%			
	in theory exam? (one option)	Reflection analysis only	00	0			
	[n=8, 8 departments]	Both	03	37.5%			
Q14	Do you assess AETCOM	Yes	06	75%			
	in Practical exam?	No	01	25%			
	[n=8, 8 departments]						
Q15	Which tool you use to assess	A full AETCOM OSPE station	03	42.8%			
	AETCOM in practical exam?	As a part of other psychomotor					
	(best option)	station with AETCOM checkpoints	03	42.8%			
	[n=7, as one department	Peer evaluation	00	0			
	has not assessed	Multisource feedback	00	0			
	AETCOM in practical exam]	Kalamazoo checklist	00	0			
		Global assessment in Viva table	01	12.5%			
Q16	If checklist is used, how it gets	Departmental decision	06	100%			
	validated?	University	00	0			
	[n=6, as six	MEU/CC members	00	0			
	departments use checklist]	No validation done	00	0			
Q17	3 - 1 - 1	Only theory	03	100%			
	you have assessed AETCOM?	Online viva	01	33.3%			
	(multiple option)	OSPE in formative assessment	01	33.3%			
	[n=3, as during						
	COVID times only departments						
	of Phase 1 have participated]						

Table 2 — Faculties' perception of challenges to take AETCOM classes (n=14*)								
(*As one department has never taken AETCOM classes, so excluded)								
O			.==0.014					

	•	Numbers of Respondent	% age of respondent
Code 1	"neither all faculties are willing, nor conversant"	14	100.0%
Code 2	"students not attend"	14	100.0%
Code 3	"faculties are overburdened with other responsibilities"	9	66.7%
Code 4	"no university guideline for validated SLOs"	8	58.3%
Code 5	"integration difficult"	7	50.0%
Code 6	"tight class schedule from 9 to 4 core subjects"	11	83.3%
Code 7	"follow up becomes difficult when weekly one hour clas	ss" 9	66.7%
Code 8	"threat from subject core topic, to share the class hours	s" 11	83.3%



Although the interim COVID pandemic has created a mess in the educational forum all over India. In our institution too it took time to cope up with the normal pace of teaching learning after the pandemic. Whatsoever, the AETCOM teaching and assessment has been initiated from the very 2019 entrant batch, who are at present in clinical disciplines. So this study was carried on to explore the practice of the AETCOM.

Zayapragassarazan Z, Kumar S, Kadambari D in 2019 2, have reviewed the records of feedback of 200 participant faculties of subsequent nine (9) ATCOM sensitization programmes and documented that according to them learning of AETCOM was more preferred in self-directed learning mode rather than the didactic lecture. Moreover it came out also that assessment would to be standardized and for the sustainability of the ATCOM module, it would to be fostered by the administration. Since it was 2019, means when the module have just launched, so obviously, authors could not enlighten the perception of the faculties who have already participated for the AETCOM classes and assessment for atleast subsequent two years.

In subsequent year, Srivastava SR, Srivastava PS³ has published their review of 28 published articles for the anticipated challenges of sustainability of AETCOM teaching, where they have pointed out collaborative efforts (integration) among the departments to sustain the AETCOM classes to undergraduates.

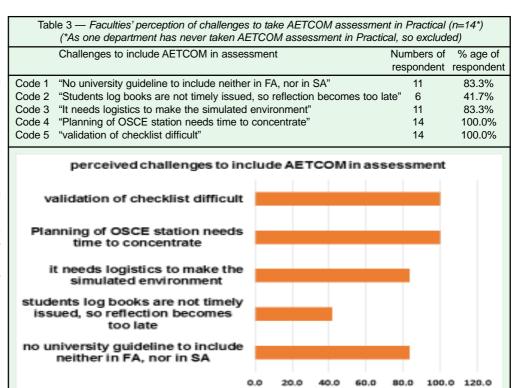
In 2021, Ghosh A, Bir A⁴ in their work of faculties' perception written assessment of AETCOM, with 96 participant faculties, have mentioned that majority of the faculties went in against of written assessment AETCOM. In this context it would to mention that their COVID lockdown prevailed during their period of work.

Recently, in 2022, Ganguly B, D Souza R, Nunes R⁵ have published their work to explore the challenges in teaching learning

process of bioethics module. In the period of one year of 2020-21, they initially have interviewed 357 undergraduate students and 47 teachers with structured questionnaire, and later conducted FGD with 32 faculties. Majority of the students (54%) preferred the teacher-directed learning, whereas they expressed their comfortability for assessment even by non-teaching staffs (74%). But they mentioned that assessment would to be restricted in formative part only. 25-34% teachers preferred debates, case based discussions in village setting as the teaching method. They opined that AETCOM to be assessed in both formative and summative examinations, but they opined against the OSCE as the tool. Incidentally, at that time (2020-21), both the teachers and students were very first time exposed to AETCOM module with the prevailed COVID scenario.

Jain T, Mohan Y (2022)⁶ has mentioned in their article has proved the significant changes in communication skill in the medical interns posted in rural/urban training centres during their internship, when they got sensitized with AETCOM by using the AETCOM module. Whatsoever, since the 2019 entrat students in our institution has not been promoted to internship till now, so this could not been evaluated.

In 2023, at present, even when this study has been conducted, the disciplines of Phase 1, Phase 2 &



Phase 3 MBBS are teaching AETCOM following the module prescribed by NMC. But their practices reflects that still there are hindrances, challenges to implement the AETCOM teaching as well as assessment in the desired mode. Even some of the departments' don't know whether they would need to teach it or not. Possibly the suggestion of Kapoor A (2017)⁷ for implementing the concept of 'facilitator's handbook' felt essential to run the AETCOM teaching and assessment in standardized way.

Scope of this Study:

By the study, the present practice of AETCOM module implementations has been explored out. Moreover the challenges perceived by the faculties are mapped out to make the recommendation. This study, if being carried out with more time period, can be extended to the other phases of MBBS curriculum and focused group discussion also can be carried out with the faculties to explore the challenges. Moreover this study may be further extended to other medical institutions to map out their practice and challenges.

Limitations of this Study:

For the time constrain, this study has been carried out for only two months' time, in limited numbers of faculties. This limitation may be overcome when more time would been allowed.

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CONCLUSION

Teaching & assessment of AETCOM is now mandatory by NMC since 2019 GMER and in recent 2024 guideline also it is pertinent for every undergraduate department. Every challenges and hurdles would to be smoothen by administrative policies so that it gets implemented in all spheres.

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