Original Article

Enhancing Teaching Competencies through Microteaching: An Observer-Based Evaluation of Medical Faculty

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Abstract

Background: Microteaching is a well-established teacher training technique designed to improve instructional skills through focused, repetitive teaching practice and constructive feedback. It allows educators to refine specific teaching behaviors in a controlled, low-stress environment before applying them in real classroom settings. This study aimed to assess the impact of microteaching sessions on enhancing the teaching performance of faculty members by evaluating improvements estimated by observers. **Methods:** This one-sample quasi-experimental study was conducted from July 2016 to June 2017, in four government medical colleges—Dhaka Medical College, Sir Salimullah Medical College, Rajshahi Medical College, and Jessore Medical College—and one medical university, Bangabandhu Sheikh Mujib Medical University in Dhaka. The study subjects were 31 selected medical teachers who participated using mixed sampling techniques—convenience sampling for institute selection. Data was analyzed using SPSS version 23.0, with both descriptive and inferential statistics, including paired and independent t-tests. **Result:** Evaluations across 24 teaching competencies showed marked enhancement in lesson planning, classroom engagement, content delivery, use of teaching aids, communication skills, student interaction, classroom management, and feedback. Notably, the proportion of teachers achieving the highest level of performance increased dramatically in key areas such as presenting objectives (6.45% to 83.87%), gaining attention (9.68% to 64.52%), and encouraging student participation (12.90% to 90.32%). **Conclusion:** Microteaching is a highly effective and innovative technique aimed at enhancing the quality of a teacher's presentation and overall teaching ability. It plays a significant role in building the teacher's confidence and encourages self-assessment. Beyond technical skills, microteaching also fosters essential personal and professional qualities in medical educators, such as developing a more approachable attitude toward students and colleagues, increasing awareness of the importance of improving computer skills, and encouraging better time management and communication for enhanced classroom performance

Keywords: Microteaching, Lesson Planning, Teaching Aids, Communication Skills.

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Cite this as: BMCJ 2019; 4 (2): 39-49

Received: 12 March 2019
Accepted: 16 May 2019

Introduction

Since teaching is a profession that requires specialized knowledge and skills, teacher candidates, to perform their jobs, should possess certain competencies. According to some authors teaching competency includes knowledge, attitude, skill, and other teaching characteristics. Some others perceive teaching competence as a teacher's behaviour that produces intended effects.[1] Effective student teaching should be the prime quality of a teacher.[2] Rama defines teaching competency as 'the ability of a teacher manifested through a set of overt teacher classroom behaviour which is resultant of the interaction between the presage and the product variables of the teaching within a social setting.' To acquire these competencies, teachers should be given special training before starting their profession.[1] Beginning teachers are new teachers who have been teaching for three years.[3] The most serious problem areas for these teachers are: classroom discipline, motivating pupils, dealing with individual differences, assessing pupils' work, relations with parents, organization of class work, insufficient materials and supplies, and dealing with problems of individual pupils. Lesser problems are relations with colleagues, planning of lessons, awareness of school policies and rules, knowledge of subject matter, and relations with principals/administrators.[4] After completing university courses, teacher

candidates are required to pass their practicum, reach an acceptable level of performance, and then become certified to teach. According to Le Maistre and Pare (cited Mahmud & Rawshon) factors explaining the increase in teachers' workload are greater societal expectations and lower societal recognition, greater accountability to parents and policymakers, pedagogical and curriculum changes being implemented at an increasing rate increased need for technical competence, increased demands beyond the pedagogical task, increased diversity among students, and more administrative work. The use of microteaching as a didactic tool was introduced during the last decades of the past century as a way to improve the skills of teachers.[4, 5] A key strength of microteaching has been its provision of a supportive environment in which beginning teachers could practice their instructional skills in manageable portions, receive feedback on their performance, reflect on that feedback and subsequently use this information to improve their teaching.[6] Although microteaching was originally developed, utilized, and researched in medical education it was soon adopted by other disciplinary fields.[7] The educators in those professions similarly implemented it as an educational tool for assessing their respective cohorts of novice practitioners to acquire/refine and reflect on their unique bodies of professional knowledge and skills, and to critique their performance and that of their peers.[7] As an innovative method of equipping teachers to be effective, skills and practices of microteaching have been implemented.[2] Medical teaching is different from school or college teaching. Medical teachers don't possess bachelor's or master's degrees in education. For medical teachers, it is not necessary to possess a degree in education or to undergo prior special training in medical teaching. It is widely accepted that the quality and competency of medical teachers can be improved by effective medical education programs.[2] There was an increase in interest in introducing microteaching techniques in Indian medical schools.[9] In this light, the proverbial question "Which philosophy/methodology is best?" should be replaced with the more helpful question: "What approach is best suited to meet the learning needs of a particular group at a specific stage in their professional development?" If such a scenario requires novices to engage in concentrated practice of skills in a safe environment with plenty of feedback, then microteaching would be a proven approach to employ in any field of practitioner preparation.[10] This study aimed to evaluate the effect of microteaching on performance of medical teachers in classroom by observer evaluation.

Methodology

This one-sample quasi-experimental study was conducted over one year (July 2016 to June 2017) in four government medical colleges—Dhaka Medical College, Sir Salimullah Medical College, Rajshahi Medical College, and Jessore Medical College—and one medical university, Bangabandhu Sheikh Mujib Medical University in Dhaka. The target population was medical teachers, and 31 selected teachers participated using mixed sampling techniques—convenience sampling for institute selection. Data collection tools included a structured checklist for evaluators, assessing 24 teaching competencies using a 5-point rating scale. Open-ended responses were also gathered from observers. Data was coded and analyzed using SPSS version 23.0, with both descriptive and inferential statistics, including paired and independent t-tests. Open-ended data were analyzed thematically. Ethical approval was obtained from the Institutional Review Board, and informed consent was secured from all participants. As most participant teachers were unfamiliar with microteaching, the researcher provided an initial briefing and explained the evaluation criteria. A mini lecture was delivered, and handouts on microteaching, lesson planning, instructional objectives, and effective lecturing were distributed. Teachers were then assigned homework to prepare a lesson plan on a topic from their specialty. In the following sessions, feedback was provided on these plans, and small group teaching sessions were facilitated based on the submitted lesson plans. Teachers engaged in group discussions on effective lecturing,

guided but not interrupted by the researcher. Practical microteaching sessions followed, where each teacher gave a short lecture while others acted as students, provided feedback, and completed self-, peer-, and evaluator-based evaluations. Ongoing support was maintained through phone follow-ups and in-person meetings to encourage continued practice.

Inclusion criteria

Teachers having teaching experience of not more than 7 years (as the study was done on junior teachers).

Teachers willing to voluntarily participate in the study

Exclusion criteria

Teachers who had training in microteaching before.

Teachers who had any post-graduation in health professional education or medical education.

Teachers having more than 7 years of teaching experience.

Results

Table 1: Distribution of the studied teachers by their performance in the classroom by observer evaluation (before and after microteaching) (n=31)

Items	Shown highest level of competency (5)		In Between 5 and 3 (4)		Shown average performance (3)		In Between 3 and 1 (2)		Need training (1)	
	Before	After	Before	After	Before	After	Before	After	Before	After
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
Preparing Lesson plan	0 (00)	12 (38.71)	18 (58.06)	7 (22.58)	1 (3.23)	0 (00)	16 (51.61)	0 (00)	8 (25.81)	0 (00)
Presenting the objectives	0 (00)	21 (67.74)	1 (3.23)	10 (32.26)	11 (35.48)	0 (00)	13 (41.94)	0 (00)	6 (19.35)	0 (00)
Gaining and maintaining attention	3 (9.68)	20 (64.52)	9 (29.03)	6 (19.35)	7 (22.58)	3 (9.68)	8 (25.81)	0 (00)	4 (12.90)	0 (00)
Activating pre-requisite knowledge	3 (9.68)	19 (61.29)	7 (22.58)	12 (38.71)	5 (16.13)	0 (00)	12 (38.71)	0 (00)	4 (12.90)	0 (00)
Explaining the purpose of the class	2 (6.45)	26 (83.87)	11 (35.48)	5 (16.13)	6 (19.35)	0 (00)	11 (35.48)	0 (00)	1 (3.26)	0 (00)

Table 1 shows that there were gross differences in studied teachers' performance before microteaching and after microteaching by observer evaluation on preparing lesson plans, presenting the objectives, gaining & maintaining the attention of the students, activating pre-requisite knowledge of the students, and explaining the purpose of the class. Before microteaching teachers' performance was poor in all items whereas after microteaching their performances improved significantly.

Table 2: Distribution of the studied teachers by their performance in the classroom by observer evaluation (before and after microteaching) (n=31)

Items	Shown highest level of competency (5)		In Between 5 and 3 (4)		Shown average performance (3)		In Between 3 and 1 (2)		Need training (1)	
	Before	After	Before	After	Before	After	Before	After	Before	After
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
Content coverage	13 (48.39)	25 (80.65)	1 (3.23)	5 (16.13)	10 (32.26)	1 (3.23)	4 (12.90)	0 (00)	1 (3.23)	0 (00)
Sequence of the contents	0 (00)	25 (80.65)	17 (54.84)	6 (19.35)	13 (41.94)	0 (00)	1 (3.23)	0 (00)	0 (00)	0 (00)
Preparation and confidence	9 (29.03)	26 (83.87)	10 (32.26)	5 (16.13)	9 (29.03)	0 (00)	3 (9.68)	0 (00)	0 (00)	0 (00)
Qualities of presentation	1 (3.23)	26 (83.87)	1 (3.23)	4 (12.90)	21 (67.74)	1 (3.23)	6 (19.35)	0 (00)	2 (6.45)	0 (00)

Table 2 shows that there was gross difference in studied teachers' performance before microteaching and after microteaching by observer evaluation of content coverage, sequence of contents, preparation & confidence of the teachers, and qualities of presentation including explanation and examples. Before microteaching studied teachers' performance was poor in all items whereas after microteaching their performance improved significantly.

Table 3: Distribution of the studied teachers by their performance in the classroom by observer evaluation (before and after microteaching) (n=31)

Items	Shown highest level of competency (5)		In Between 5 and 3 (4)		Shown average performance (3)		In Between 3 and 1 (2)		Need training (1)	
	Before	After	Before	After	Before	After	Before	After	Before	After
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
Selection of using of teaching aid (s)	0 (00)	16 (51.61)	13 (41.94)	13 (41.94)	7 (22.58)	2 (6.45)	9 (29.03)	0 (00)	2 (6.45)	0 (00)
Instructional materials	0 (00)	12 (38.71)	0 (00)	17 (54.84)	18 (58.06)	2 (6.45)	11 (35.48)	0 (00)	2 (6.45)	0 (00)
Verbal and nonverbal communication	9 (29.03)	26 (83.87)	2 (6.45)	5 (16.13)	16 (51.61)	0 (00)	4 (12.90)	0 (00)	0 (00)	0 (00)
Eye contact	7 (22.58)	26 (83.87)	5 (16.13)	4 (12.90)	12 (38.71)	1 (3.23)	3 (9.68)	0 (00)	4 (12.90)	0 (00)

Table 3 shows that there were gross differences in studied teachers' performance before microteaching and after microteaching by observer evaluation on selection and use of teaching aid (s), use of instructional materials (shown as words, images, or videos), verbal & nonverbal communication and eye contact with the students. Before microteaching studied teachers' performance was poor in all items whereas after microteaching their performance improved significantly.

Table 4: Distribution of the studied teachers by their performance in the classroom by observer evaluation (before and after microteaching) (n=31)

Items	Shown highest level of competency (5)		In Between 5 and 3 (4)		Shown average performance (3)		In Between 3 and 1 (2)		Need training (1)	
	Before	After	Before	After	Before	After	Before	After	Before	After
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
Observing the students' participation	11 (35.48)	26 (83.87)	4 (12.90)	5 (16.13)	10 (32.26)	0 (00)	3 (9.68)	0 (00)	3 (9.68)	0 (00)
Active participation of the students	4 (12.90)	28 (90.32)	8 (25.81)	3 (9.68)	12 (38.71)	0 (00)	5 (16.13)	0 (00)	2 (6.45)	0 (00)
Scope of asking questions by the students	4 (12.90)	20 (64.52)	8 (25.81)	10 (32.26)	16 (51.61)	1 (3.23)	2 (6.45)	0 (00)	1 (3.23)	0 (00)
Checking students understanding	3 (9.68)	18 (58.06)	8 (25.81)	13 (41.94)	19 (61.29)	0 (00)	1 (3.23)	0 (00)	0 (00)	0 (00)
Scope of notetaking by the students	12 (38.71)	24 (77.42)	10 (32.26)	6 (19.35)	6 (19.35)	1 (3.23)	1 (3.23)	0 (00)	2 (6.45)	0 (00)

Table 4 shows that there were gross differences in studied teachers' performance before microteaching and after microteaching by observer evaluation on observing the students' participation by the teacher, active participation of the students, scope of asking questions by the students, checking students' understanding by the teacher, and scope of notetaking by the students. Before microteaching teachers' performance was poor in all items whereas after microteaching their performance improved significantly.

Table 5: Distribution of the studied teachers by their performance in the classroom by observer evaluation (before and after microteaching) (n=31)

Items	**Shown highest level of competency (5)**		**In Between 5 and 3 (4)**		**Shown average performance (3)**		**In Between 3 and 1 (2)**		**Need training (1)**	
	Before	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**	**Before**	**After**
	No. (%)	**No. (%)**	**No. (%)**	**No. (%)**	**No. (%)**	**No. (%)**	**No. (%)**	**No. (%)**	**No. (%)**	**No. (%)**
Providing feedback	3 (9.68)	24 (77.42)	14 (45.16)	7 (22.58)	13 (41.94)	0 (00)	1 (3.23)	0 (00)	0 (00)	0 (00)
Time management	14 (45.16)	26 (83.87)	11 (35.48)	3 (9.68)	3 (9.68)	2 (6.45)	3 (9.68)	0 (00)	0 (00)	0 (00)
Carefulness about the physical aspect of the classroom	8 (25.81)	27 (87.10)	19 (61.29)	4 (12.90)	4 (12.90)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)
The psychological aspect of the students	5 (16.13)	24 (77.42	16 (51.61)	10 (32.26)	10 (32.26)	0 (00)	0 (00)	0 (00)	0 (00)	0 (00)
Summarizing & emphasizing important points	4 (12.00)	23 (74.19)	2 (6.45)	19 (61.29)	19 (61.29)	0 (00)	6 (19.35)	0 (00)	0 (00)	0 (00)
Reference for further study	0 (00)	19 (61.29)	2 (6.45)	12 (38.71)	12 (38.71)	0 (00)	3 (9.68)	0 (00)	14 (45.16)	0 (00)

Table 5 shows that there were gross differences in studied teachers' performance before microteaching and after microteaching by observer evaluation on providing feedback to the student, time management, carefulness about the physical aspect of the classroom, the psychological aspect of the students, summarizing & emphasizing important point and references for further study. Before microteaching studied teachers' performance was poor in all items whereas after microteaching their performance improved significantly.

Table 6: Paired Sample T-test results of before and after microteaching total scores of each item in "Observer evaluation to assess performances of the teacher in classroom"

Sl. No	**Items**	**Before Microteaching**	**After Microteaching**	**Pair t-Test**
		- **X** **SD**	**-** **X** **SD**	**t Value** **df** **P value (1 tailed)**
1	Preparing lesson plans for the class	1.97 .706	4.35 .551	13.919 30 .000
2	The objectives of the class	2.23 .805	4.68 .475	16.058 30 .000
3	Gaining and maintaining the attention of the students	3.03 1.140	4.87 .428	8.077 30 .000
4	Activating pre-requisite knowledge of the students	2.80 1.243	4.61 .495	7.045 30 .000
5	Explaining the purpose of the class	3.06 1.063	4.84 .374	8.845 30 .000
6	Content coverage	3.81 1.276	4.77 .497	3.661 30 .001
7	Organization and sequence of the contents	3.52 .570	4.81 .402	11.180 30 .000
8	Preparation and confidence about presenting contents	3.81 .980	4.84 .374	6.062 30 .000
9	Qualities of presentation of the contents including explanations and examples	2.77 .762	4.81 .477	12.403 30 .000
10	Teaching aid (s) It may be blackboard/whiteboard/OHP/Power-Point Slides/Posters etc.	3.00 1.000	4.45 .624	7.411 30 .000
11	Instructional materials: Instructional materials are what was shown as written words, images, or videos in whiteboard OHP (handout distributed to the students)	2.52 .626	4.32 .599	12.068 30 .000
12	Verbal and Nonverbal communication, Verbal: clear, audible & good language. Nonverbal: Gesture, facial expression, body movement	3.52 1.061	4.84 .374	7.519 30 .000
13	Eye contact with the students	3.26	4.81	6.013

		1.290	.477	30 .000
14	Observing the students' participation	3.55 1.338	4.84 .374	5.064 30 .000
15	Active participation of the students	3.23 1.087	4.90 .301	8.935 30 .000
16	Scope of asking questions by the students	3.39 .919	4.61 .558	6.111 30 .000
17	Checking students understanding by questioning/problem-solving activities	3.42 .720	4.58 .502	7.881 30 .000
18	Scope of notetaking by the students	4.00 1.000	4.74 .514	3.774 30 .001
19	Providing feedback to the students	3.61 .715	4.77 .425	8.303 30 .000
20	Time management	4.16 .969	4.77 .560	3.712 30 .001
21	Carefulness about the physical aspect (light, temperature, noise, seat capacity, electricity, teaching aids, supporting stuffs) of the classroom	4.13 .619	4.87 .341	6.061 30 .000
22	The psychological aspect of the students	3.84 .688	4.77 .425	5.609 30 .000
23	Summarizing & emphasizing important points	3.13 .885	4.74 .445	10.178 30 .000
24	References for further study	2.06 1.063	4.61 495	12.038 30 .000

Table 6 shows that there was highly significant difference by pair t-test between before microteaching and after microteaching ($p \neq 0.000$) on every item by observer evaluation of the teacher's performance in the classroom. So, the Null hypothesis is rejected, and the Research hypothesis is accepted on every item by observer evaluation. So, it can be concluded, that the observer perceived that microteaching has a positive effect on teachers lecture class performance.

Table 7: Distribution of opinion of the observer about studied teachers' strength in classroom (before and after microteaching) (n=31)

Categories of strength	**Before Microteaching**		**After Microteaching**	
	Frequency*	%	Frequency*	%
Friendly with Students	7	22.58	13	41.93
Sincere to students	7	22.58	16	51.61
Caring to reduce anxiety	10	32.25	13	41.93
Well prepared	7	22.58	18	58.06
Confident	4	12.90	11	35.48
Made class enjoyable	3	9.67	13	41.93

Checking students understanding	3	9.67	18	58.06
Good time management	4	12.90	17	54.83
Active	2	6.45	13	41.93
Clear presentation	2	6.45	12	38.70
Good computer Skill	0	0.00	11	35.48

* Multiple responses

Table 7 points out the views of the observer on different categories of studied teachers' strengths before and after microteaching. These categories are very important for better classroom performance. It shows that microteaching has helped to enhance the positive effect on the strength of studied teachers in classrooms in different categories.

Table 8: Distribution of opinions of the observer about studied teachers' weaknesses in the classroom (before and after microteaching) (n=31)

Categories of weakness	**Before Microteaching**		**After Microteaching**	
	Frequency*	**%**	**Frequency***	**%**
Not well prepared	6	19.35	0	0.00
Not fluent in English	12	38.70	5	16.12
No use of teaching aid	14	45.16	6	19.35
Less eye contact	14	45.16	0	0.00
Low voice	12	38.70	3	9.67
Poor Time management	9	29.03	3	9.67
Speak too fast	8	25.80	2	6.55
Didn't summarize	9	29.03	0	0.00
Poor presentation	13	41.93	4	12.90
Too much hand movement	7	22.58	2	6.55
Excess body movement	4	12.90	3	9.67
Less computer skill	8	25.80	4	12.90
Content overload	12	38.70	0	0.00
Speak slowly	11	35.48	4	12.90
Not well prepared	6	19.35	0	0.00

*Multiple responses

Table 8 points out the views of observer on different categories of studied teachers before and after microteaching. These categories are very important for better classroom performance. For example, not Fluent in English, no use of teaching Aids, and less eye contact were some of the main weaknesses of the studied teachers. It shows that microteaching has helped to reduce the weakness of studied teachers in classrooms in different categories.

Table 9: Distribution of opinion of observer about steps that can be taken for improvement of studied teachers' skills (before and after microteaching) (n=31)

Steps for improvement of teachers' teaching skills in the classroom	**Before Microteaching**		**After Microteaching**	
	Frequency *	**%**	**Frequency ***	**%**
Training on microteaching	25	80.64	5	16.12
Practice speaking English	9	29.03	4	12.90
More time allotment	9	29.03	7	22.58
Training on the use of teaching Aid	17	54.83	7	22.58
Practice session	12	38.70	8	22.80
Training on Voice Raise	15	48.38	5	16.12
Training on presentation quality	12	38.70	5	16.12
More class	16	51.61	15	48.38
Workshop on teaching skill	21	67.74	22	70.96
Training on computer skill	19	61.29	20	64.51

*Multiple responses

Table 9 points out the views of the observer before and after microteaching on different categories about steps that can be taken for improvement of the performance of studied teachers in the classroom. These categories are very important for better classroom performance. It shows that after microteaching observer felt that teachers are more capable of using teaching aids, presentation quality has improved, and their voice has improved. It also

emphasizes workshops on teaching skills, more classes, training on teaching aids and training on computer skills.

Discussion

The study revealed that microteaching had a profound impact on improving various aspects of teaching. Initially, none of the teachers prepared lesson plans properly. After undergoing microteaching, 30 (96.77%) teachers began preparing detailed lesson plans and found them helpful for delivering lecture classes effectively. Bakir also noted that pre-service teachers who experienced microteaching faced fewer difficulties in lesson planning.[11] Before microteaching, teachers either failed to mention the objectives or presented them unclearly. Although 25 (80.75%) teachers attempted to share objectives at the beginning of their class, these were not SMART (Specific, Measurable, Achievable, Realistic, Time-bound). After microteaching, 67.74% presented SMART objectives. Similar results were found by Ismail *et al.* and Koross *et al*.[12, 13] Only 12 (38.71%) teachers were able to keep students engaged throughout the class before microteaching. After microteaching, 30 (97.77%) teachers successfully gained and maintained attention. Dooley *et al.* emphasized this skill as vital in their book *Principle of Instructional Design*.[14] Before microteaching, just 10 (32.26%) teachers activated students' prerequisite knowledge. Post-training, all teachers incorporated this step. Additionally, 58.09% initially failed to explain the purpose of the lesson. After microteaching, 83.87% effectively stated the lesson's purpose. Gagné *et al.* also noted that explaining the lesson's goal improves attentiveness cited by Dooley *et al*.[14] Before microteaching, 16 (51.62%) teachers properly covered their content. Following the training, the majority showed notable improvement in completing lesson content effectively. Regarding content sequence, 17 (54.84%) maintained proper flow pre-training, while afterward, most teachers improved significantly. Davis *et al.* in *Tools for Teaching* highlighted both content coverage and sequencing as essential components of effective lecturing.[15] Before microteaching, 19 (61.29%) teachers were confident and well-prepared. Afterward, all reported increased confidence and better preparation. Koross *et al.* and Ralph *et al.* found similar outcomes, noting improved self-confidence due to microteaching.[10, 13] A significant number of teachers (25.80%) had below-average presentation quality before microteaching. Afterward, 96.77% improved in delivering content with clear explanations and relevant examples. Kaleta and Joosten highlighted the importance of explanation quality for student understanding.[16] Initially, 15 (48.38%) teachers moved among students to observe participation, 13 (41.94%) did so occasionally, and 3 (9.68%) remained stationary. After microteaching, all teachers actively monitored student engagement. Davis *et al.* emphasized that observing student participation is a hallmark of effective teaching.[15] Only 12 (38.71%) teachers encouraged student participation before training. Post-microteaching, all teachers promoted active engagement. Similarly, encouragement to ask questions rose from 38.71% to 96.77%. Checking students' understanding through questioning increased from 35.49% to 100% after training. Davis *et al.* also stressed regular questioning as a tool for gauging comprehension.[15] Before microteaching, 25 (80.64%) teachers managed time well. After training, 30 (96.77%) maintained time efficiency, arriving and ending classes promptly. Bakir *et al.* and Koross *et al.* also concluded that microteaching significantly improves time management.[11, 13] Before training, 27 (87.10%) were mindful of the classroom's physical setup. Afterward, all teachers showed increased concern.[11] Bakir *et al.* noted that microteaching positively affects classroom management and physical setup awareness. Only 6 (19.35%) teachers summarized lessons and emphasized key points before microteaching. Afterward, all did so effectively. Bakir *et al.* also found that microteaching helps teachers conclude lessons properly. Regarding references, only 2 (6.45%) teachers provided adequate references before microteaching, whereas after microteaching all teachers provided proper references.[11] Several studies have emphasized broad range of skills

improved through microteaching, including classroom management, fluency, question handling, and summarization.[6, 7] Teachers were found to be friendly and caring. However, weaknesses such as being professionally overburdened, lack of fluency in English, minimal use of teaching aids, and poor computer skills were noted. Notably, 70.96% were too busy professionally to prepare properly. Ismail *et al.* and Bakir *et al.* both found that microteaching helps teachers identify their strengths and weaknesses.[11, 12] Since the participants were also involved in clinical duties, challenges such as lack of training, practice opportunities, institutional support, and financial incentives must be carefully addressed.

Limitations of The Study

Teachers from only 4 Government medical colleges and one medical university were included in the research. Though there was an intention to include teachers at non-government medical colleges also, unfortunately, the researcher could not convince the authorities to allow him to do the research in non-government medical colleges.

The number of female teachers was less than male teachers. It was very difficult to convince the teachers to be included in the research. So, random sampling was not possible. Convenient sampling was done. As most of the doctors are very busy, it is really difficult to get teachers several times for this type of quasi-experimental study.

Conclusion

Microteaching is a highly effective and innovative technique aimed at enhancing the quality of a teacher's presentation and overall teaching ability. It plays a significant role in building the teacher's confidence and encourages self-assessment, making it a valuable tool for self-directed learning. Beyond technical skills, microteaching also fosters essential personal and professional qualities in medical educators, such as developing a more approachable attitude toward students and colleagues, increasing awareness of the importance of improving computer skills, and encouraging better time management and communication for enhanced classroom performance.

Recommendation

It is recommended that microteaching be incorporated regularly into teacher training programs, especially in medical education, to continuously enhance teaching effectiveness. Institutions should provide structured microteaching sessions, encourage constructive feedback, and promote observer-evaluation to help educators refining their skills, adapt to modern teaching tools, and foster a more engaging learning environment.

Funding: No funding sources.

Conflict of Interest: None declared.

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