IISRR-IJR

# Relevance of Microteaching in Classroom Teaching-Learning Process: A Pilot Study

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## Abstract:

*Microteaching is an effective student teachers' behaviour modification technique that allows them to improve their teaching skills. This study explored the transfer of microteaching skills, learnt during the Bachelor of Education (B.Ed) programme, in real classroom teaching after joining as a full time school teacher. The study used a mixed style of research approach. Purposive random sampling was used to select 45 teachers who pursued their B.Ed. in the academic session 2020-2021 and 2021-2022 from a self-financed institute affiliated to Guru Gobind Singh Indraprastha University.They are working as Primary Teachers (PRTs), Trained Graduate Teachers (TGTs), and Post Graduate Teachers (PGTs) in various schools pan India. The researcher developed a questionnaire comprising of 15 questions to collect data from the sample. The microteaching skills learnt during B.Ed. programme were assessed using a questionnaire. The quantitative data gathered from the sample, was analyzed, and interpreted. The findings revealed that microteaching skills are quite relevant in honing teachers' teaching skills and beneficial for reflecting on their teaching performances in real classroom teaching.*

***Keywords:*** *Microteaching, Teaching skills, Student Teachers, Feedback*

***Abbreviations:*** *B.Ed.= Bachelor of Education, PRT= Primary Teacher, TGT= Trained Graduate Teacher, PGT= Post Graduate Teacher*

## 1. Introduction:

The art of teaching is a complex process. It involves transfer of knowledge from one person to other that facilitates and influences the process of learning. Competence of a teacher is decided based on students' understanding on the concept taught in the class. Bachelor of Education programme is meant to train graduate or post graduate students in teaching profession. Student teachers are imparted theoretical and practical knowledge required for inculcating teaching competence among them. The pedagogic skill for teaching can be acquired only through more structured and systematic teaching techniques. Microteaching is one of the behavioural modification techniques which is practiced in a planned manner in teacher education institutes.

It is a remarkably effective teacher training technique that has been implemented since 1960s in teacher education. It was first designed and used in Stanford University by Dwight Allen and his

colleagues (Kochhar, 1997)[1] with the intention of increasing the quality of teacher education. The microteaching developed at Stanford University was characterized by the following aspects:

i) Focus on discrete teaching skills
ii) Modeling of the skills,
iii) Short teach session with real conditions
iv) Feedback with help of video tape recorder and
v) Re-teach session with different pupils.

According to J.C.Clift et al(1976)[2] Microteaching is divided into following three phases-

(a) Knowledge acquisition phase: During this phase, the student teacher obtains knowledge by conducting a literature review and seeing a demonstration lesson - a skill presentation style.

(b) The skill acquisition phase: In this phase, the student teacher plans and executes the lesson. He/she creates a short lesson and puts the skill into practice The microteaching setting, and feedback are the

(c) n a real-classroom setting. The aim of this research paper is to study the relevance of knowledge of micro components of this phase.

(d) Transfer phase: During this phase, the student teacher integrates the many skills learned and teaches micro-teaching skills in real classroom teaching. Systematic feedback plays particularly important role in improving the teaching skills of student teachers. The review of literature of research articles undertaken from various educational databases, indicates importance and need of microteaching skills in teacher training programmes.

## 2. Review of Related Studies:

Various studies have been conducted on microteaching skills. Sarkar, N and Das, A K (2020)[3] conducted a study on one hundred (100) student-teachers of B. Ed. colleges of West Bengal having Life Sciences and Physical Sciences as their one of the major pedagogy subjects. The results of the study revealed that the student-teachers trained through microteaching attain higher level of competence to teach science at secondary stage than those trained through conventional practice teaching as observed in the observation schedule.

[1] Kochhar S.K. (1977). *Methods and techniques of teaching*. New Delhi: Sterling Publishers Pvt. Ltd.

[2] J.C.Clift et al(1976) Structure of The Skill Acquisition Phase of A Microteaching Programme. *British journal of Educational Psychology, Vol 46, Isssue 2, (June 1976) pp. 190-197 Retrieved from* https://bpspsychub.onlinelibrary.wiley.com/doi/epdf/10.1111/j.2044-8279.1976.tb02311.x

[3] Sarkar, N. and Das, A. K. (2020) Effectiveness of Applying Integrated Strategies of Microteaching Skills in Teaching Science, *IISRR- International Journal of Research; Vol-6; Issue- III,* December 31, 2020 ISSN 2394-885X Page *137-149*

Selma DENEME (2020)[4] conducted a video aided supplementary task; an Out-of-class Video Recorded Microteaching session (OCVMT) for English language teacher trainees (n=55). The findings showed that the video-recorded microteaching sessions worked well in teacher education programs. The OCVMT sessions were found to solve the two most common problems faced in microteaching. With the help of microteaching practice, teacher candidates experiment and learn teaching skills by breaking them into smaller parts and varied components (Uzun, 2012)[5].

Fernandez (2012)[6] in his study on 'Learning Through Microteaching Lesson Study in Teacher Preparation' concluded that microteaching is an efficient tool in improving the teaching skills of the pre-service teachers. Rama, T.N. & Y. Vasudhakar Reddy (2013)[7] examined the attitude of student teachers towards Microteaching. The findings revealed that the entire sample of student teachers had favourable attitude towards Microteaching, and they were of opinion that the Microteaching method provides a scope to evaluate their strengths and weaknesses in teaching.

Microteaching is an effective means of improving teaching skills that shape pre-service teachers' teaching skills. With the proven success among the pre-service and in-service teachers, it helps to promote real-time teaching experiences (Remesh, A. 2013)[8]. It focuses on sharpening, developing, and enhancing the learner-teachers' confidence.

## 3. Relevance of this Study:

Microteaching practice is an integral part of Bachelor of Education (B.Ed.) programme. Student teachers practice microteaching skills before encountering real classroom situation. Various studies have been done on microteaching with a focus on student teachers while pursuing their teacher education programme. In the present study the researcher explored that after completing the B.Ed. programme how relevant the microteaching skills were for the teachers working in the schools. Therefore, the data had been collected from the teachers who completed their B.Ed. from the same institute where the researcher was teaching just to ensure

[4] Selma DENEME (2020) TOJET: The Turkish Online Journal of Educational Technology – April 2020, volume 19 issue 2 Retrieved from http://www.tojet.net/volumes/v19i2.pdf

[5] Uzun, N. (2012). A sample of microteaching in environmental education and its effect on pre- service teachers' presenting effective lessons. *Asia-Pacific Forum on Science Learning and Teaching,* vol. 13, no.1.

[6] Fernandez, M. L. (2012). Learning through Microteaching Lesson Study in Teacher Preparation. *Action in Teacher Education,* 26/4, 37 – 47. Retrieved from https://www.tandfonline.com/doi/abs/10.1080/01626620.2005.10463341

[7] Rama,T.N., Vasudhakar Reddy, Y. *1 IOSR Journal of Research & Method in Education (IOSR-JRME) e-ISSN: 2320–7388,p-ISSN: 2320–737X Volume 3, Issue 1 (Sep. –Oct. 2013), PP 71-77 Retrieved from www.iosrjournals.org*

[8] Remesh, A. (2013). Microteaching, an efficient technique for learning effective teaching. *Journal of Research in Medical Science*, Vol. 18, No. 2, pp. 158 – 163.Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3724377/

that they had practiced microteaching skills and undergone all the three phases of microteaching during their B.Ed. programme.

## 4. Rationale of the Study:

The purpose of the present study was to ascertain the relevance of microteaching skills in the real classroom teaching. In the B.Ed. programme, where the researcher was teaching, the student teachers practice ten micro teaching skills in third semester prior to simulated teaching and sixteen weeks School Internship Programme. During School Internship Programme, they get an opportunity to integrate microteaching skills in real classroom settings. The study was conducted on forty-five full time teachers who completed their B.Ed. from the Institute where researcher was teaching, to know relevance of microteaching skills and to what extent they were able to integrate microteaching skills while delivering content in the real classroom situation.

## 5. Objectives of the study:

i. To investigate the relevance of microteaching on the teachers in real classroom situation.
ii. To compare microteaching skills of male and female teachers.
iii. To compare microteaching skills of male arts and science stream teachers.
iv. To compare microteaching skills of PRT, TGT and PGT teachers.

## 6. Hypothesis:

Following Null hypothesis have been formulated for the study:

**Hypothesis-1:** There is no Significant Mean Difference in Microteaching Skills of teachers with respect to Gender.

**Hypothesis-2:** There is no Significant Mean Difference in Micro teaching skills of teachers with respect to Stream.

**Hypothesis-3:** There is no Significant Mean Difference in Micro teaching skills of teachers with respect to category of teacher.

## 6. Definitions of the Terms Used:

- **Microteaching:** According to Allen, D.W. (1966)[9]: Microteaching is a scaled down teaching encounter in class size and class time. According to Passi, B.K. and Lalitha, M.S. (1976)[10]: Microteaching is a training technique, which requires student teachers to teach a single concept using specified teaching skill to a small number of pupils in a short duration of time.

[9] Allen, D. (1967, September). Microteaching, a description. ERIC document (ED 019 224). Retrieved from http://files.eric.ed.gov/fulltext/ED019224.pdf

[10] Passi, B.K. and Lalitha, M.S. "Microteaching in India Context (Mimeo) "Department of Education, Indore University, Indore, 1977.

- **Teaching skills:** Teaching skills are abilities teachers must develop in order to be successful in the field of education. These abilities include dispositions, emotional intelligence, classroom management, communication, content knowledge, and knowledge of curriculum and standards.
- **Student Teachers:** Students pursuing Bachelor of Education Programme are known as Student Teachers.
- **Feedback:** Feedback in educational context is information provided to a learner to reduce the gap between the current performance and a desired goal. (Sadler, 1989)[11]

## 7. Methodology

### 7.1 Area of the study:

The research was conducted on the 45 teachers working in twenty-three schools located pan India. All these teachers pursued B.Ed. from same self-financing institute affiliated to Guru Gobind Singh Indraprastha University, Delhi.

### 7.2 Sample Design of the Study:

The participants of the study were selected by convenient sampling method. The study was conducted on the 45 schoolteachers who were working as Primary Teacher (PRT), Trained Graduate Teacher (TGT) or Post Graduate Teacher (PGT) in various schools pan India. It was ensured that these teachers pursued B.Ed. from the institute where the researcher was teaching and had practiced microteaching skills in the third semester of B.Ed. programme. The study was regarding the relevance of microteaching as a pedagogical method to help them develop their instructional skills in real classroom teaching. Details of sample distribution is as under:

Table No. 1: Gender wise Distribution of the Sample

| Gender | N | Percentage |
|---|---|---|
| Males | 6 | 13.3 |
| Females | 39 | 86.7 |
| Total | 45 | 100 |

Table No. 2: Stream wise Distribution of the Sample

| Stream | N | Percentage |
|---|---|---|
| Arts | 30 | 66.7 |
| Science | 15 | 33.3 |
| **Total** | 45 | 100 |

[11] Sadler, D.R. (1989) Formative Assessment and the Design of Instructional Systems. Instructional Science, 18, 119-144. https://doi.org/10.1007/BF00117714

Table No. 3: Category wise Distribution of the Sample

| Category of Teacher | N | Percentage |
|---|---|---|
| PRT | 9 | 20 |
| TGT | 23 | 28.9 |
| PGT | 13 | 48.9 |
| Total | 45 | 100 |

Table No. 4: Three-Dimensional Blue-Print of Sample Design:

| Category of Teacher | Arts Stream | | Science Stream | | Total |
|---|---|---|---|---|---|
| | Male | Female | Male | Female | |
| PRT | 0 | 7 | 0 | 2 | 09 |
| TGT | 1 | 15 | 3 | 4 | 23 |
| PGT | 1 | 6 | 1 | 5 | 13 |
| Sub-Total | 2 | 28 | 4 | 11 | 45 |
| Grand Total | 30 | | 15 | | **45** |

### 7.3 Tool Used for the Study:

Integration of the microteachings teaching skills, learnt during B.Ed. programme, were assessed by using a questionnaire. The Researcher developed a questionnaire consisting of 15-items. The fifteen questions were based on different microteaching skills. The questionnaire consisted of teacher's personal information, fourteen multiple choice statements regarding integration of microteaching skills posed to teachers to elicit information on the degree of agreement or disagreement and fifteenth question was open ended. Multiple choice questions were based on skill of set induction, skill of illustrating with examples, skill of demonstration, skill of black board writing, skill of stimulus variation, skill of reinforcement, skill of questioning, skill of explanation, and skill of closure. Views of three educators with expertise in the field of Teacher Education were sought to ensure validity of the content and language of the test items. Reliability of the questionnaire was tried out with a small group of teachers working in nearby area. This group had completed B.Ed. from the same institute where the researcher was teaching. The questionnaire was finally administered on the sample by sharing it through Google form. The Likert's five-point scale was used, and the weightings were Always = 5, Often =4, Sometimes =3, Occasionally = 2, Never= 1.

## 8. Data Collection and Analysis of Collected Data Findings/Results and Interpretation of Results:

### 8.1 Data Collection:

The data was collected from forty-five teachers who had been working in 23 schools spread across India. A google form was shared with them to collect responses. Nine were working as

PRT, 23 as TGT and 13 as PGT. 30 teachers belonged to Arts stream and 15 belonged to science stream. Out of total sample of 45 teachers, six were males and 39 were females.

### 8.2 Analysis of Collected Data and Interpretation:

The collected data has been analyzed using t-Tests to compare gender wise and stream wise microteaching skills of teachers and ANOVA Tests has been used to analyze the micro teaching skills of teachers with respect to category. The study focused on three categories of teachers i.e., PRT, TGT and PGT.

Following Data have been revealed from the observations during microteaching in real classroom situation based on their teaching experience. Tally marks were made during classroom teaching, and converted into scores as the following, and thereafter, those scores were converted into values and further computed as data. The results revealed from that calculation are given in Table No.5.

*Always = 5, Often =4, Sometimes =3, Occasionally = 2, Never= 1*

Table No. 5: Percentage of the result of Microteaching-Based Questions

| Sl. No. | Items | Always | Often | Sometimes | Occasionally | Never |
|---|---|---|---|---|---|---|
| 1. | You plan your teaching activities based on instructional objectives | 44.4 | 31.1 | 17.8 | 6.7 | |
| 2. | You prepare a lesson plan for every topic to be delivered in the class. | 62.2 | 20 | 15.6 | - | 2.3 |
| 3. | You introduce the topic based on the components of the set induction skill learnt during microteaching session of B.Ed. | 66.7 | 15.6 | 17.8 | - | |
| 4. | You used teaching learning materials are used in the class. | 33.3 | 31.1 | 31.1 | 4.5 | |
| 5. | How frequently do you ask questions to test pupils' understanding of the concept? | 68.9 | 28.9 | - | 2.2 | - |
| 6. | Microteaching performance helped you in understanding your weaknesses and strengths of teaching better. | 73.3 | 13.3 | 13.3 | - | - |
| 7. | You used skill of probing questions to elicit answers from the students. | 71.1 | 17.8 | 11.1 | - | - |
| 8. | You apply skill of stimulus variation in the classroom. | 55.6 | 28.9 | 15.6 | - | - |
| 9. | Practicing the components of the skill of Black/Green Board writing during B.Ed. enhanced your skill of Black/Green Board writing. | 68.9 | 17.8 | 8.9 | 2.2 | 2.2 |
| 10. | Use of skill of demonstration increases your students' active participation. | 73.3 | 20 | 6.7 | - | - |
| 11. | You provide appropriate reinforcement to your students. | 71.1 | 20 | 8.9 | | |
| 12. | Feedback provided by the peers help in improving | 73.3 | 11.1 | 15.6 | - | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| | your overall teaching skills. | | | | | |
| 13. | Feedback provided by the teachers helped in improving your overall teaching skills. | 80 | 11.1 | 8.9 | - | - |
| 14. | Recapitulation is done for each, and every topic you delivered in the class | 80 | 13.3 | 6.7 | - | - |

**8.2.1 Hypothesis -1:** There is no Significant Mean Difference in Microteaching Skills of teachers with respect to Gender.

**Table No. 6: Significant Difference in Microteaching Skills of teacher with respect to Gender**

| Variable | Gender | N | Mean | Std. Deviation | t | Level of Significance at 0.05 level |
|---|---|---|---|---|---|---|
| Total Score | Male | 6 | 59.33 | 6.77 | 1.93 | NOT Significant |
| | Female | 39 | 63.56 | 4.69 | | |

The above Table No. 6 shows that, the calculated t-value of Micro teaching skills of teacher with respect to Gender. The calculated 't' value (1.93) is lesser than the table value 1.96 and it is statistically not significant. Hence, the framed null hypothesis "There is no Significant Difference in Micro teaching skills of teacher with respect to Gender." is accepted.

**8.2.2 Hypothesis-2:** There is no Significant Mean Difference in Micro teaching skills of teachers with respect to Stream.

**Table No. 7- Significant Difference in Microteaching Skills of teachers with respect to Stream**

| Variable | Stream | N | Mean | Std. Deviation | *t* | Level of Significance at 0.05 level |
|---|---|---|---|---|---|---|
| Total Score | Arts | 30 | 63.03 | 5.48 | 0.67 | NOT Significant |
| | Science | 15 | 62.93 | 4.54 | | |

The above Table No. 7 shows that, the calculated t-value of Micro teaching skills of teacher with respect to Stream. The calculated 't' value (0.67) is lesser than the table value 1.96 and it is statistically not significant. Hence, the framed null hypothesis "There is no Significant Difference in Micro teaching skills of teacher with respect to Stream" is accepted.

**8.2.3 Hypothesis- 3:** There is no Significant Mean Difference in Micro teaching skills of teachers with respect to category of teacher.

Table No. 8: Significant Difference in Micro teaching skills of teacher with respect to category of teacher

| Dimension | Source of Variation | Sum of Squares | df | Mean Square | 'F' Value | Level of Significance at 0.05 level |
|---|---|---|---|---|---|---|
| Micro teaching skills | Between Groups | 68.971 | 2 | 34.49 | 1.33 | Not Significant |
| | Within Groups | 1091.029 | 42 | 25.96 | | |
| | Total | 1160.000 | 44 | | | |

The above Table No. 8 shows the analysis of variance, Micro teaching skills of teacher with respect to category of teacher. The calculated F-value (1.33) is lesser than the table value 1.96 and it is statistically not significant at 0.05 levels. Hence, the framed null hypothesis "There is no Significant Mean Difference in Micro teaching skills of teachers with respect to category of teacher" is accepted.

## 9. Interpretation of Findings:

Question wise analysis and interpretation of findings are as follows:

(1) **Planning teaching activities based on instructional objectives-** According to the findings of the study only 44.4% teachers always planned their teaching activities based on instructional objectives. It indicates that more emphasis is required on instructional objectives because instructional objectives make the whole teaching-learning process specific, and goal directed.

(2) **You prepare a lesson plan for every topic to be delivered in the class-** According to the findings of the study only 62.2% teachers always prepared a lesson plan for every topic to be delivered in the class. It indicates that more teachers should prepare a lesson plan because lesson plan serves as a guide that a teacher uses every day to determine what the students will learn, how the lesson will be taught as well as how learning will be evaluated.

(3) **Introduce the topic based on the components of the set induction skill-** According to the findings of the study 66.7% teachers always introduced the topic based on the components of the set induction skill. It indicates that teachers should pay attention on the previous knowledge of the student before introducing the topic.

(4) **Use of teaching learning materials-** According to the findings of the study only 33.3% teachers always used teaching learning materials in the classroom. Teachers should use teaching learning materials to make their teaching more effective. Now due to more emphasis on online tools, trend of using teaching learning materials in hard form might have reduced.

(5) Skill of questioning- According to the findings of the study only 68.9% teachers always used skill of questing for testing understanding of the learner. More teachers should use skill of questioning to increase students' participation and assessing their understanding related to topic.

(6) Understanding the weaknesses and strengths of teaching- According to the findings of the study 73.3% teachers always agreed that microteaching is helpful in identifying the weaknesses and strengths of teaching, therefore it should be an integral part of teacher training programmes.

(7) Skill of probing questions to elicit answers from the students- According to the findings of the study 71.1% teachers are always of the opinion that skill of probing questions is helpful in eliciting answers from the students, therefore during B.Ed. programme due importance should be given to practice this skill.

(8) Use of the Skill of stimulus variation in the classroom- According to the findings of the study only 55.6% teachers always used components of the skill of stimulus variation. This skill involves deliberate change in attention drawing behavior of the teacher to secure and sustain students' attention to what is being taught. The skill of stimulus variation implies attracting and focusing students' attention by changing stimuli in the environment. Therefore, more practice of this skill is required during the teacher training programme.

(9) Skill of Black/Green Board writing- According to the findings of the study only 58.9% students always found skill of Black board writing useful in real classroom situation. This data was collected from the students who did their practiced Microteaching skills in online mode. These teachers could not get exposure of the real classroom teaching/blackboard writing during B.Ed. programme; therefore, they might not be finding this skill much useful at the time of their real classroom teaching.

(10) Use of skill of demonstration- According to the findings of the study 73.3% teachers always agreed that the skill of demonstration increases students' active participation. Therefore, demonstration should be included in teaching on regular basis.

(11) To provide appropriate reinforcement to the students- According to the findings of the study 71.1% teachers always provided appropriate reinforcement to the students. Positive reinforcement helps in strengthening the desired behavior and negative reinforcement helps in weakening the undesired behavior, more teachers should be encouraged to use appropriate reinforcement.

(12) **Feedback provided by the peers help in improving overall teaching skills-** According to the findings of the study 73.3% teachers believed feedback provided by the peers always helped in improving their overall teaching skills. Therefore, during real classroom teaching also there should be a provision of getting feedback from colleagues.

(13) **Feedback provided by the teachers helped in improving overall teaching skills-** According to the findings of the study 80% teachers believed feedback provided by the teachers (teacher educators) always helped in improving their overall teaching skills. Therefore, during real classroom teaching also feedback from the Principal, Vice- principal or Coordinator should be taken positively.

(14) **Recapitulation is done for each, and every topic delivered in the class-** According to the findings of the study 80% teachers believed they always used to do recapitulation after delivering the topic in the class. Teachers may be encouraged to do recapitulation emphasizing on the main points covered in the class and linking the same with the next topic.

(15) **Overall Impression-** Microteaching Skills learnt during B.Ed. programme helpful in enhancing over all teaching competencies- According to the findings of the study micro teaching helped the students in many ways. Micro teaching had an impact on the improvement of teaching skills like developing lesson plans, using different methods, helps in developing presentation, and how to use all the skill in the classroom. Findings of the study agree with the results of Rama, T.N. & Y. Vasudhakar Reddy (2013) and Remesh, A. 2013 which revealed that the entire sample of student teachers had favourable attitude towards microteaching and microteaching is an effective means of improving teaching skills that shape pre-service teachers' teaching skills, respectively.

## 10. Suggestions:

(i) Orientation programme on microteaching should be organized for in service teachers. It will help them in updating different microteaching skills and to integrate the same in classroom teaching.

(ii) It is suggested to use more and more teaching aids in the classroom to make the classroom environment more interesting. It will also help in increasing students' active engagement in the classroom.

(iii) The result indicates that the teachers do not use components of the skill of stimulus variation properly, therefore it is suggested that workshops for in service teachers maybe organized focusing on multifaceted personality of the teacher.

## 11. Conclusion:

The sample of the study found microteaching skills quite relevant in honing their teaching skills and beneficial for reflecting on their teaching performances in real classroom teaching. Microteaching skill sessions of various teaching skills helped them find more opportunities to practice teaching and improve their teaching skills. Most of them expressed that it has given them opportunity for understanding minute aspects of teaching. In descriptive answer teachers revealed that micro teaching had positive impact on the improvement of teaching skills like developing lesson plans, using different methods, helping in developing presentation, classroom management and how to integrate all the skill in the classroom. Considering the findings of this study it is **s**uggested that the teachers should be given sufficient practice of microteaching skills covering all the three phases during B.Ed. programme.

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