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# Constructivist Teaching-Learning Strategy Regarding Microteaching of Student Teachers.

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## Abstract

**Introduction**

Constructivism is most appropriate philosophy for the 21st century highlighted in the National Curriculum Framework, 2005, developed by NCERT. So it is the responsibility of teacher to arrange such teaching-learning activities so learner can learn through this philosophy. To make aware student teachers about such philosophy we brought curricular changes in the teacher education programs and made aware future teachers about such philosophy.

This paper focuses on the change which we brought in the microteaching area according to constructivism.

**Title**

A study of constructivist teaching-learning strategy regarding microteaching of student teachers.

**Objectives**

1. To study the reflection of constructivist teaching-learning strategy in microteaching of student teachers.

**Our Efforts to bring Constructivist Teaching in microteaching**

1. Introduced concept and principles of constructivism

2. Showed demonstrations of each skill.

3. Asked student teachers to involve following activities in their teaching plan according to constructivism

- In blackboard writing asked to pay more attention on graphics, concept maps to organize and interrelate key points instead of writing mere points.
- In questioning skill asked to give stress on higher order questions, asked to encourage learners to ask questions, also asked to provide reinforcement for motivation.
- In stimulus variation skill asked to make class more interactive, asked to active the class physically and mentally too.
- While planning of explanation skill asked to use support material i.e. visual aids, asked to arrange demonstrations. And to check comprehension ability of the learner asked to end the explanation with one or two questions.
- In set Induction skill asked to create learning environment , involve stories, anecdotes, fables and related matter to come up to the content.

4. To get reflection of constructivist philosophy gave suggestions according to actual teaching and asked to re plan and re teach.

**Conclusions**

- Student teachers planned physical and mental activities in their 5 minutes teaching plan.
- Ensured that all learners were participating in the lesson.
- Asked thought provoking questions which assisted learners to process the information at a higher level on Bloom's taxonomy.
- Connected previous knowledge with new one.
- Performed various roles such as facilitator, organizer of learning experiences, manager of learning process, scaffolding etc.
- Showed creativity, activeness and enthusiasm.

***Key words****: Constructivism, microteaching, teacher education,*

**Introduction :**

Today it is expected that not to transmit knowledge to the learner but let them create, construct, explore their own knowledge independently through interactions with the environment. This philosophy is called Constructivism. This is most appropriate philosophy for the 21st century and is embraced today and is also highlighted in the National Curriculum Framework, 2005, developed by NCERT. So it is the responsibility of teacher to arrange such teaching-learning activities so learner can learn through this philosophy. In-service teacher training programs such as refresher courses, orientation courses help to make aware teachers about such philosophy. Also pre service teacher training institutes can bring curricular changes in their teacher education programs and make aware future teachers about such philosophy.

Writer of this paper is teacher educator in the S.N.D.T. College of Education, Pune. In academic year 2010-2011 her Institute decided to make curricular changes according to constructivism approach. To bring constructivist approach in the curriculum they have not changed the syllabus but arranged each activity of B.Ed. curriculum which explored student teachers to learn independently. It was a collaborative project of the institute, every teacher educator was participated in that project. This paper focuses on the change which we brought in the microteaching area .

**Title :**

A study of constructivist teaching-learning strategy regarding microteaching of student teachers.

**Objectives**:

1. To study the reflection of constructivist teaching-learning strategy in microteaching of student teachers.

**Sample :**

28 student teachers having mathematics one of the teaching method.

**Microteaching** :

Microteaching is one of the prime activity in the teacher education program. It is a highly individualized training device. It is a teaching skill training technique for would be teachers or for student teachers. It helps would be teachers to gain mastery on various skills which are corely involved in actual classroom teaching. Before practice teaching /practice lesson teacher educator introduces various teaching-learning skills to the student teachers and helps them to gain each skill up to mastery level.

Our institute gives stress on the following six skills 1. Blackboard writing 2. Set Induction 3. Explanation 4. Stimulus variation, 5. Questioning 6. Reading : This skill is mainly for language students. As usual the part of the microteaching program we follow following steps.

1. Orientation of each teaching skill by teacher educator,

2. Demonstration of particular skill by teacher educator, we arranged at least three demonstrations, one is from language subject, one is from social science subject and one is from science/mathematics

3. Groupwise/ method wise guidance in planning of lesson note.

4. Actual teaching of student teacher

5 . Feedback

6. Reteach

There are various sub skills under each skill. Teacher educator evaluates each skill according to sub skill chart and gives feedback to each student teacher to gain mastery.

As we have accepted to bring constructivism in the class so we decided to re plan evaluation chart of microteaching , according to the features of new approach So obviously it was need to rethink on sub skills of each skill. So we arranged a self training workshop for all teacher educators and thought over it. We collaboratively thought and made changes in the evaluation chart in the above mentioned five microteaching skills..

**Our Efforts to bring Constructivist Teaching in microteaching**

According to constructivist approach and on the basis of newly prepared evaluation chart first we, teacher educator, gave demonstrations. Then we asked student teachers to plan their lessons and then we asked them to perform each skill .We observed each microteaching skill of student teachers according to newly prepared evaluation chart that is from the view point of constructivist approach.

Through microteaching workshop we tried to prepare student teachers for changing role of teacher that is from information provider to facilitator, organizer of learning experiences, manager of learning process, scaffolding etc.

Following changes were asked to student teachers to bring constructivism in the class.

1. In blackboard writing asked to pay more attention on graphics, concept maps to organize and interrelate key points instead of writing mere points.

2. In questioning skill asked to give stress on higher order questions, asked to encourage learners to ask questions, also asked to provide reinforcement for motivation.

3. In stimulus variation skill asked to make class more interactive, asked to active the class physically and mentally too.

4. While planning of explanation skill asked to use support material i.e. visual aids, asked to arrange demonstrations. And to check comprehension ability of the learner asked to end the explanation with one or two questions.

5. In set Induction skill asked to create learning environment , involve stories, anecdotes, fables and related matter to come up to the content.

**Points of Evaluation of Microteaching skills**:

Following is the chart which mentions particulars points of evaluation about each skill which we were evaluated previously and which we have evaluated according to constructivist teaching strategy.

| Microteaching Skill | Sub skills evaluated previously through each microteaching skill | Sub skill evaluated according to constructivist philosophy | Reflected principle of constructivism |
|---|---|---|---|
| Blackboard Writing | Neat , proportionate and in attractive manner | In the form of Concept map, increased provoking thought process | 1. Learning is contextual.<br>2.The crucial action of constructing meaning is mental. |
| Stimulus Variation | Teachers' movements, teachers' intonation, use of colour chalks for blackboard writing, | Activity based, interactions based, stressed on pupils movements. | 1.Learning is an active process<br>2. Learning is a social activity.. |
| Explanation | Students were passive listener. | Use of learning material made students curious, alert. Increased thought provoking process. Self learning started. | The crucial action of constructing meaning is mental. |
| Questioning | Gave answers orally, Most of the questions were knowledge based. | Movements / activity involved in giving answers. Tried to test higher objectives that is comprehension, application and skill. Tried to develop problem solving capacity of the learner. | 1. Motivation is a key component in learning.<br>2. Learning is active and mental process. |
| Set induction | Directly telling content | Created learning environment to come up to the content. Involved stories, anecdotes, fables and related matter which helped learner to come up to the content. | 1. Learning is contextual.<br>2.Learner Constructs/creates his/her own knowledge on the basis of previous one |

**Impact observed in the Mathematics microteaching workshop**

- Each 5 minutes lesson was activity based. Every student teacher tried to engage each learner physically and mentally.
- Blackboard writing skill : Mathematics student teachers started thinking how to prepare concept maps, how to develop curiosity, thinking capacity of the learner through blackboard writing. It involved geometrical figures, stepwise solution of example, way of solving problem, way of writing mathematical proof, theorem etc. All student teachers tried to develop thought provoking process of the learner through blackboard writing . Means blackboard writing skill helped student teachers to develop their own thought provoking process
- Explanation skill : Student teachers done explanation with the help of geometrical models and stencils of figures. Also used charts and role up board to gain mastery on this skill. Through explanation skill student teachers tried to bring interactions in between material and students. Also while giving explanation student teachers tried to create, construct new knowledge of the learner on the basis of their previous knowledge.
- Stimulus variation skill: Stimulus variation skill was full of activity based. Engaged learners to perform various activities. Asked to draw diagram to prepare model, to measure angles and sides of geometrical figures., asked to find similarities and differences. Asked to solve example on the blackboard. Asked to interact with each other.
- Questioning skill: Questioning skill involved provoked questions. Student teachers kept some information in front of learners and asked to come to conclusion. It developed comprehension ability and problem solving capacity of the learner. Asked to solve examples on the blackboard. It tested application level. Also activity sheets were distributed among learners to learn independently by themselves. Instead of knowledge based questions included higher order questions too. For that purpose student teachers constructed various types of questions, which engaged learner physically and mentally too.
- Set Induction: Here expected role of student teacher was to help learners to construct their own knowledge on the basis of previous one. For those purpose student teachers developed games, puzzles, riddles, constructed stories, anecdotes according to the content. For preparation of lesson note of Set Induction skill student teachers searched encyclopedia, read stories of mathematicians, read various books related to school mathematics. They read following books,
  a. Katha Hi Ganitachi.
  b. Ganitatil Gamati Jamti
  c. Magic of numbers.
  d. Jadu sampavili sutrani
  e. Gunakarachya vividh padhhti.
  f. Shunyacha shodh.
  g. Vaidic Mathematics.

h. Biography of Indian Mathematicians.

**Conclusions about Constructivist Teaching Strategies:**

As a Teacher Educator writer of this paper observed following changes in the constructivist microteaching class.

1. Principles of constructivism are reflected through microteaching of student teachers.

- Student teachers planned physical and mental activities in their 5 minutes teaching plan.
- Ensured that all learners were participating in the lesson.
- Asked thought provoking questions which assisted learners to process the information at a higher level on Bloom's taxonomy.
- Connected previous knowledge with new one.
- Performed various roles such as facilitator, organizer of learning experiences, manager of learning process, scaffolding etc.
- Showed their creativity, activeness and enthusiasm.

**Bibiliography**


- Best J.W. & Kahn J. V. (2010), Research in education, New Delhi : Prentice Hall of India Ltd.
- Buch M.B. 'A survey of Research in Education I-VI volumes'.

  New Delhi : N.C.E.R.T. Shri Aurobindo Marg.

- Kumar Sudhir (2000). 'Teaching of Mathematics'. New Delhi : Anmol Publications.
- N.C.E.R.T. (2005) :'National Curriculum Framework for teacher education 2005'. New Delhi : N.C.E.R.T. Shri Aurobindo Marg.
- P.G. Department of education and S.N.D.T. College of Education for Women (2012), Reforming Education through Constructivism, Pune : P.G. Department of education and S.N.D.T. College of Education for Women.