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Development of Competence In Teaching Skills – An Integrated Approach

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Abstract

Educationists have realized that having competent teachers who possess necessary knowledge, skills and attitude is more important than having ample number of teachers with inadequate expertise. Teachers may have rich knowledge of their subject, but the way they transmit that knowledge effectively to the students makes them competent teachers. For this, pre-service teachers need to acquire expertise in using various teaching skills before they teach in real classroom situations. Teaching has its repertoire of skills. Hence there is a need for a microteaching environment in teacher preparation courses which enables pre-service teachers to practise these skills under controlled laboratory setting. Efforts are being made to identify the required teaching skills which a teacher should master for effective teaching. This article presents an outline of the various steps of microteaching, core teaching skills, and the conceptual framework for practising skills in relation to subject matter and teaching strategies in science. It also discusses how this framework provides an insight into the education and training to develop competence in various teaching skills in science and how it helps to develop decision making ability in teaching by deciding on 'what, when and how' of teaching strategies and skills.

Keywords: Competence, Integrated Approach, Microteaching, Teaching Skills

INTRODUCTION

A sound programme of teacher education has to take care of all the components of teacher education in a comprehensive and multi-dimensional manner, The teacher preparation programmes have not changed much and therefore under severe criticism for being static, unresponsive to the emerging challenges of the present time. There is a growing feeling that teacher education is not effective in producing efficient teachers.

In the present system of teacher education, the methods of teaching the content of school subjects in the teacher education curricula is inadequate and inappropriate. The methods of teaching school subjects have to be taught based on their content categorization and the use of appropriate techniques and strategies for teaching different kinds of content of school subjects. The common content categorization in all the school subjects includes facts, concepts, generalizations, skills, etc. Selection of an appropriate technique and strategy depends on the nature of the content in general and type of content in particular. There is a need to use the appropriate techniques and strategies for teaching different kinds of subject matter.

The implication of existing situation is that pre-service and in-service teacher education programmes should develop the teachers' competence in strategies of teaching different kinds of subject matter and skills dealing with the process of interaction between teacher and students.

In pre-service teacher education programmes, the courses which have direct relevance for developing teaching competence are the content-cum-methodology courses and microteaching. The content-cum-methodology courses are compulsory, the microteaching is offered as a separate course or a component of a content-cum-methodology course. When these courses are offered as separate course, they are studied concurrently.

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Teaching is generally considered as an integrated professional activity concerned with bringing about desirable changes in learners. It involves making decisions about when to use various teaching abilities and how to integrate these into the teaching act in order to provide conditions which facilitate learning. Therefore in the professional preparation of teachers, the emphasis should be on the development of self-concept and formation of appropriate cognitive structures, attitudes and professional skills in teaching. For, it is a combination of these factors which would eventually act as a major influence in shaping their attitudes and subsequent behaviours with regard to the decision-making process.

Microteaching is a valuable addition to repertoire of methods used in education and training of teachers. There is plenty of evidence to show that microteaching has been a valuable addition to the repertoire of methods used in teacher education and training. Thus, it is important to keep in mind that microteaching is an additional technique and is not intended as a substitute for school-based experience. There is extensive literature which documents the various practices that have been used in microteaching, research done on microteaching and its associated components of modeling, practice and feedback. Research studies that were conducted on microteaching revealed that microteaching is effective in producing improvement in teaching performance of pre-service teachers and in bridging the gap between theory and practice (Madike Francis, 1980; Elliot, 1982; Mayhew, 1982; Pauline, 1993; Abifarin, 2004; Adewoyin, 2007; Esiobu & Maduekwe, 2008; V. Can, 2009; Kilic, 2010; Chawla & Thukral, (2011); Singh, 2011; Fakomogbon et al., (2012); Adedapo, 2013; Ghanaguru, Nair & Yong, 2013; Remesh, 2013; Ijioma, 2014; Otsupius, 2014, etc.)

Microteaching has also been found to change teacher perceptions of teaching as well as performance. The effectiveness of microteaching can be attributed to discrimination learning of teaching skills through identifying the skills in action, analyzing their components and evaluating their effectiveness in use. In this way, the student teachers learn to discriminate 'appropriate' and 'inappropriate' behaviours (Wagner, 1973). Student teachers have been found generally to react favourably to their microteaching experiences and performance on microteaching has been found to be a reasonably good predictor of success in classroom teaching (McGarvey,et al. 1986). Morrison and McIntyre (1969) noted that socially competent teachers were more effective in teaching'. They in another study (1972) drew attention to the social psychological perspective as one way of looking at teaching. The social psychological approach viewed teaching as a socially skilled activity dependent upon good interpersonal relationships and communication between teacher and the learner. Argyle (1969 b) saw microteaching as a valuable method of helping student teachers practice the social skills of teaching and develop a thorough understanding of the processes of social interaction. A special feature of Argyle's social skills training model is that the social skills involved in teaching were first identified and student teachers were given training in each skill separately. Then the skills were put back together again, integrating them into the overall teaching performance.

Shavelson (1973) regarded teacher's decision making ability as the most important teaching skill to which all other teaching skills were related. Decision making as a teaching skill has also been the line of development that McIntyre (1983) has flowed in extending his cognitive structures model of microteaching (McIntyre, MacLeod and Griffiths, 1977). McIntyre pointed out that social skill includes cognitive processes as well as observable behaviours. He argued that the emphasis in microteaching should be on conceptualization of teaching skill as normative not in relation to specific behaviours but in relation to cognitive processes'.

Microteaching provides an opportunity to student teachers or experienced teachers to acquire new teaching skills and refine old ones. The steps in microteaching include the following:

- Analyzing teaching skills in behavioural terms.
- Demonstrating the teaching skills on videotape or films or in normal classroom.
- Planning a short lesson in the subject of interest in which to use teaching skill.
- Teaching the lesson to a small group of students which is videotaped or audiotaped.
- Providing feedback to the student teacher who observe and analyse his/her lesson with the help of a supervisor. The feedback and supervisor's comments provide an insight to the student teacher in the use of teaching skill.
- Planning the lesson in order to use the skill more efficiently second time.
- Reteaching of the revised lesson to different but comparable groups.
- Providing feedback on the retaught lesson which is analysed with the help of supervisor.

During microteaching, the training in individual teaching skills results in concentrating on particular aspects of teacher's performance, undervaluing the purpose of teaching which is to facilitate learning. Microteaching is supposed to develop competence in teaching skills. Yet the way the micro-lesson is planned, it can't be implemented in the real classroom to teach a given content something with the intention of enabling students to learn. Even the progressive integration of skills being attempted does not provide a solution to the problem of "establishing strategies of teaching out of a set of teaching skills to facilitate students' learning."

Table-1. Conceptual Framework for Practising Skills in relation to Subject-matter and Teaching Strategies in Science.

S.No	Skill	Kinds of Subject matter	Strategy along with the Moves
1.	Introduction	Concepts/generalizations/skills	Discovery and Expository Strategies • Stating the goals of the lesson • Stating the major points to be covered in the development of the lesson • Using an analogous situation • Using historical material • Reviewing the prerequisite knowledge • Giving reasons for studying a particular topic • Presenting a problem situation
2.	Explaining a. Interpretive	Concepts/generalizations/skills	Expository Strategy **Interpretive moves** • Reviewing the meaning of the terms • Translating from symbolic to verbal form and vice-versa • Paraphrasing • Giving an analogous situation • Giving examples and non-examples with reasons • Giving counter examples • Giving necessary or sufficient conditions/both necessary and sufficient conditions
	b. Descriptive /Narrative (including demonstration)	Processes/Concepts/ generalizations	Expository strategy • Sequence and structure • Demonstration of an experiment • Narrating an experiment/a process with suitable learning resources
	c. Reason Giving	Concepts/Generalizations	Deductive Discovery Strategy
3.	Questioning a. Structuring of classroom questions b. Probing questioning	Concepts/Processes/ Generalizations	i. Inductive-deductive strategy ii. Inquiry strategy iii. Problem-solving strategy iv. Concept mapping strategy
4.	Stimulus Variation	All kinds of subject matter Treated as supportive skills and practiced in every teaching situation	
5.	Reinforcement		
6.	Use of Blackboard		
7.	Achieving Closure		

It is apparent from the analysis of macro-lessons which are intended to teach specific items of subject matter in real classroom situations, that the type and extent of teaching skills acquired through microteaching programme are rarely incorporated into the macro-lessons both at the planning and implementation phases of teaching.

The present users of microteaching continue to ignore the importance of conceptualization of teaching skills as 'normative in relation to cognitive processes'. Further, under the existing practices in methodology of teaching and microteaching combine, it is hard to believe that teachers develop decision making ability which is

considered as the most important teaching skill to which all other skills are related.

There is a need to use the appropriate strategies for teaching different kinds of subject matter. There is a heavy information processing demand imposed in transacting different kinds of subject matter. In order to cope up with such a complex situation, teachers require teaching strategies which would enable them to control the subject matter of instruction and direct student behaviour towards intended learning outcomes. In fact, several empirically based studies have led to the identification of two types of teaching strategies – content-bound and content-free (Smith, 1976) which are concerned with the ways of interacting with the content of instruction interactions between teacher and students respectively. An added advantage of the teaching strategies from the point of training is that the teaching can be analysed from the perspective of 'ventures' and 'moves' (content-bound strategies) or from the perspective of ensemble of specific skills, behaviours and activities (content-free strategies) (Smith, 1964, 1967, 1970, 1976 and Cooney, Davis and Henderson, 1975, Todd, 1972, Gage, 1978). These strategies can be an effective tool for observing, analyzing lessons and providing feedback to student teachers. Thus there exists the need for training the prospective teachers in the use of teaching strategies.

The review of developmental work in microteaching reveals that learning in microteaching takes place in the cognitive, affective and performance skill dimensions of the teaching ability. The potential learning in microteaching points to the distinction between the performance, cognitive and affective dimensions of a teaching ability. However, the learning of a 'teaching skill' generally refers to its performance. Therefore, teacher education programmes need to take account of training in the performance skill dimension and education in the cognitive and affective dimension of teaching ability. These inferences form the rationale for the approach under consideration. The approach has to be conceptualized in terms of the suggested inputs for each of the learning gains – cognitive processes, affective learning and performance skill of teaching skills and strategies.

The social psychologist views teaching as a socially skilled activity dependent upon good inter-personal relationships and communication between the teacher and learners. Therefore, the nature of social skills of teaching – introduction, explaining, questioning, illustrating with examples, reinforcement, stimulus variation, achieving closure, classroom management, etc., have to be explained on the basis of their contribution to implement the logical structure of the lesson.

Different instructional strategies help to transact different kinds of subject matter to develop different thinking skills/process skills besides learning the subject matter. Use of teaching skills facilitates enhancement of interaction between the teacher and the taught. However, use of a teaching skill in itself may not lead to learning of the subject matter or development of thinking skills. Integration of appropriate teaching skills with a strategy of teaching can make teaching effective.

The conceptual framework given in Table–1 provides an insight into the education and training to develop competence in various teaching skills in science. The framework helps to develop decision making ability in teaching by deciding on **what, when** and **how** of teaching strategies and skills. The 'expository strategy' provides opportunity to plan and practice the *Introducing a lesson, explaining, questioning* major skills namely; and the supporting skills namely *Stimulus Variation, Reinforcement, Use of Blackboard and Achieving Closure*.

Understanding the Skills and Strategies of Teaching

In the methodology course, the emphasis during the lecture and discussion sessions may be on 'what, when and how' of the moves and the ways of generating strategies for teaching specific items of knowledge. The strategies should be consistent with the nature of the knowledge and the learner, instructional time and amenable for realization of the objectives of teaching an item of knowledge.

Lesson planning should be emphasized in that the subject matter could be viewed as the context in which the appropriate moves and skills would be identified, integrated and practised. Integrating teaching skills with strategies of teaching an item of knowledge would also provide experience in developing decision making ability.

Discrimination training should be provided to learn to identify the moves and skills in actionin symbolic (written) and visual models of strategies of teaching different kinds of knowledge, to analyse critically their behavioural components and to evaluate their effectiveness.

The nature of social skills of teaching – introduction, questioning, closure, reinforcement, stimulus variation, etc., needs to be explained to implement the logical structure of the lesson.

Modeling needs to be provided through demonstration lessons and videotaped lessons to develop an understanding of the teaching process through conceptualization of not only how to use moves and skills but also when to use them.

Conclusion

Microteaching is an effective tool to improve teaching skills and teaching behaviours of pre-service teachers. It

helps to enhance the confidence and develops the capability for effective communication in student teachers. The conceptual framework for practising skills in relation to subject-matter and teaching strategies in science provides an insight into the education and training to develop competence in various teaching skills in science. The framework helps to develop decision making ability in teaching by deciding on 'what, when and how' of teaching strategies and skills. It also helps the student teachers to understand how integration of appropriate teaching skills with appropriate strategies of teaching can make teaching effective.

Competing interests

The authors have declared that no competing interests exist.

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