A Study of Classroom Practices On the Impact of In-Service Training Programme at Secondary Level

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Abstract- *It is very essential for any Nation to focus with new developments in the field of education. To keep in this view, the most vital part in Teacher Education has to improve both pre-service as well as in-service training will be put together as under umbrella. The present study was attempted to observe the in-service training programme for teachers at secondary education level. This study was joint collaboration with Ministry of Human Resource Development (MHRD) and National Council of Educational Research and Training (NCERT) taken as a Programme Advisory Committee (PAC) under Rastriya Madyamic Shiksha Abhiyan (RMSA) for classroom observation and to explore the changes in classroom practices of secondary schools as a result of such training. A multi-stage sampling was used for selection of districts and schools. The study was undertaken with the purpose of establishing benchmark on the classroom process in different contexts of secondary education in Uttar Pradesh (UP) State. The main objective of the study was to assess effectiveness/impact of in-service training for secondary school teachers. The instruments of the study were information sheet, observation schedule, Focused Group Discussion and Questionnaire. The analysis of data has been done both quantitative as well as qualitative. Findings revealed that majority of teachers (81.04 percent) have not under gone in-service training programmes. The results indicated that the classes are highly classroom oriented and there is a need to orient the teachers to take the children outside of the classroom wherever possible. The results also indicated that there is a need to reduce teacher talk and increase the time for interaction with the students, performing group work and assessment of learning for improving learner performance.*

Keywords: Science Education, In-service Training Programme, Classroom practices.

Introduction

The teachers have to update their knowledge day by day. For this, every teacher must undergo in-service training programme. In-service teacher training is a most vital part of any teacher education training programme. The classroom practice is one of the important components of successful teaching for any teacher. The preparation of in-service training programme at secondary training level aides to build and inject demonstrable skills to basic educators.

The National Curriculum Framework for Teacher Education (NCFTE, 2009, p.74), suggests that In-service Programmes and Continued Professional Development at the Secondary Stage should focus on following:

- In-service programmes should be redesigned to provide classroom support to teachers and to orient interactive sessions based on teachers' needs and concerns.
- A focus should be established within in-service programmes on the methods of enquiry specific to the sciences and social sciences, along with an emphasis on disciplinary content.
- The content and method of in-service training should be based on an assessment of teachers' needs initiated jointly by SCERT and IASEs.

According to MHRD (RMSA framework), since the teacher is the most important component in school education it is necessary to continuously upgrade the quality of teachers through in-service education programmes and a variety of other measures, apart from pre-service qualifying programme of teacher training viz., B.Ed. There is a great regional disparity in the provision for secondary teacher training institutions in the country. There are regions such as the North Eastern region for example, that do not have enough teacher training facilities compared to other states. A careful state-level planning will be necessary for ensuring adequate number of trained teachers and their continuous enrichment. Besides the conventional in-service education programmes, it will be necessary to develop a mechanism whereby secondary school teachers will be able to share their experiences and learn from each other, thereby developing a learning community and culture.

National Curriculum Framework – 2005 (NCERT, 2005, p129-130) observed that in-service education needs to become a catalyst for change in school practices. Sharing of teaching experiences and diverse classroom practices to generate new ideas and facilitate innovation and experimentation.

Review of Literature

Wenglinsky (2001) study explores the link between classroom practices and student academic performance by applying multilevel modeling to the 1996 National Assessment of Educational Progress in mathematics. The study finds that the effects of classroom practices, when added to those of other teacher characteristics, are comparable in size to those of student background, suggesting that teachers can contribute as much to student learning as the students themselves.

Gillian Roehrig and Shauna Garrow (2007) Evidence of a gap in student understanding has been well documented in chemistry: The typical student holds an abundance of misconceptions. The current expectation is that educational reform will foster greater student achievement via inquiry teaching within classrooms. Using assessments involving both conceptual and algorithmic knowledge of gas behavior, gas laws, and phase changes in chemistry, this study aims to determine the relationship between inquiry teaching and student achievement. The topics were tested in the context of a unit from a reform-based curriculum that features inquiry, hands-on activities, and cooperative learning. This curriculum provides

step-by-step guidance for each lesson in the teacher materials, in order to promote quality inquiry teaching. Two schools were involved in this study, with two high school chemistry teachers from each school. Each teacher participated in professional development and implemented this curriculum with sufficient training and guidance to develop reform methods. Student achievement was found to positively correlate with the use of inquiry teaching about the assessed concepts, regardless of teacher experience or school context.

Alghamdi and Sihes (2016) observed that scientific studies found the impact of professional development on effective classroom practices in Higher Education. This study hypothesizes no statistically significant effect of lecturers' professional development on classroom practices in some selected Saudi Universities not as highlighted in the model. Hierarchical multiple regressions were used to showcase the effects of professional development factors on classroom practices. The sample of this study consisted of 45 professionally trained lecturers randomly selected from the three Saudi Universities. The study found that teaching competence has a positive statistically significant relationship with the classroom practices, next is technology, evaluation competence, human competence, and cultural competence are among the variables found to have weak effects on classroom practices in Saudi Universities.

Research Questions

1. What kind of provision has been imparted to science teachers under in-service training in the state of UP?
2. What are the major factors demanding in-service training for science teachers?
3. What are the benefits of in-service training for science teachers at secondary level?

Statement of the Problem

In-Service Training Programme at Secondary School Level: Impact on Classroom Practices

Objectives of the Study

1. To measure the attitudes of the science teachers with respect to factors associated with goals, support provided, students, materials, supervision and monitoring, the approach to teaching, and the evaluation.
2. To assess the teacher classroom process.
3. To measure the quantity of learning experiences in terms of 'opportunity time' provided to children in schools having different structural and contextual characteristics.
4. To identify the interventions needed under RMSA with respect to classroom processes.
5. To assess the facilities in the schools and quality of teaching learning processes in classroom practices.

Methodology of the Study

The study adopted descriptive survey method.

Sample of the Study

A multi-stage sampling design was used for selection of districts and schools.

Table 1: Schools selected for the Study

SN. No.	Context	Name of the School with Blocks	
		Aligarh	**Barabanki**
1.	SC/ST dominated area School	Bihari Lal Inter college Aligarh	Govt. Inter college Nindura Barabanki
2.	Minorities dominated school	Tamil A Millaet Sr. Secondary School Daudpur	Govt. Inter College Siruligauspur
3.	School with gender gap	Bihari Lal Bharti Inter College Palmukhipur	Govt. Inter college Subeha
4.	Urban slum School	Govt. Girls Inter College Aligarh	Govt. Girls Inter College Devan
5.	Rural (remote areas) School	Govt. Inter College Vidhipur, Sahanol	Govt. Inter College Suratganj
6.	School in disturbing areas (situated in crowd area/industrial area/ area nearby Busor Railway station/ natural calamity prone area)	Naurangi Lal Govt. Inter College Aligarh	Govt. Inter College Barabanki
7.	School in Educationally Backward blocks (lowest literacy rate)	Shri Krishan Inter college Sankhra Gangiri	Govt. Inter college Pokhra Haidergarh

Tools of the Study

1. Information Sheet (Principal/Head Master)

This tool provides information regarding to school profile with respect to name of the school, address, enrolment, result, dropout, staff position and status. This tool was also collecting information with respect to the physical access, availability of infrastructure facilities, Laboratory, etc., in the school.

2. Classroom Observation Schedule

This schedule was meant for observing classroom process in each of the subjects taken by concerned subject teacher during his/her class. It consists of 29 items. First nine items are related to general information and the other 20 are related to process of classroom teaching skills, teacher students' behavior. These are related to lesson designing, introduction of lesson, presentation of new concepts, asking questions and answering them, classroom process sensitization treating the students on equal footing, use of teaching learning material, activities

conducted during the classes, attentiveness of teachers, concluding the lesson, special feature of the lesson, etc.

3. Focus Group Discussion (FGD) For Students

This tool is meant to conduct the Focus Group Discussion (FGD) with the students in order to study inclusiveness and equity, classroom practices, learning process, learning style of students, discrimination during classroom practices, challenges in learning processes, ICT integration, disturbance in learning environment, adequacy/inadequacy of classroom and other resources, reward and punishment, library and laboratory and games and sports. The Focused Group Discussions with students of classes IX and X in small groups (students in each category viz. SC, ST, Minority, Girls, OBC, General and CWSN students) to find out the impact of classroom process on teaching practices of teachers. Further questions were to be asked for deeper probing. All responses of the students were recorded. The guidelines focused on the changes in teachers and their teaching after the training related to the preparation and use of TLM, changes noticed in the behavior, activities organized in the classroom and participation of the students in activities, type of new activities organized and students' involvement in activities.

4. Questionnaire for Teachers

This questionnaire aims at eliciting teachers' perception quality with respect to enabling conditions, teaching learning process, about the training programme which they attended. The questionnaire is filled by the teachers. There are 18 items in the tool. The item seeks to elicit their perception, the transactional mode, self-assessment and relevance.

DATA COLLECTION

Table 2: Sample of the Study

S. No.	Tool Name	Target Group on whom the tool has been used	Total Sample
1	Information Sheet	Principal/Head master	14
2	Classroom Observation Schedule	Teachers	125
3	Focus Group Discussion	Students	48
4	Questionnaire	Teachers	58

Data Analysis

The data was also analyzed both quantitatively and qualitatively by using percentages and content analysis.

Major Findings of the Study

The major findings of the study were as follows:

- It was observed that techniques used for introducing the lesson in the class irrespective of the subjects were posing a problem, asking a question and reviewing the previous lesson.
- Majority of the teachers (62.06 percent) responded that the resources available are adequate enough in the school.
- Majority of the teachers (68.96 percent) did not use community resources with respect to constraint was the no availability of funds and they do not get sufficient time with respect to lengthy syllabus and involvement in non-teaching activities.
- Majority of teachers (81.04 percent) did not undergo in service training.
- Majority of students (84.48 percent) participated in the classroom transaction.
- It was observed that new concepts were mainly presented by the teacher and students hardly participated in the teaching learning process either through discussion or in the activities.
- It was observed that it is necessary to guide the teachers in using learner experiences while explaining the concepts irrespective of the subjects. As activity was least used in Hindi, Math's, Science and Social Science, teachers need to be oriented towards it.
- It was observed that more number of questions were asked in Science class. In Social Science classes students never asked questions to seek more information.
- It was observed that blackboard work was used in all the classes and computer, video, films and Over Head Projector were hardly used in any subject.
- It was observed that games were never played by students, role play and learning by doing are rarely used, field study /observation was hardly used.
- The results indicated that the classes are highly classroom oriented and there is a need to orient the teachers to take the children outside of the classroom wherever possible.
- It was observed that textbooks were rarely used either to consolidate learning or to develop concepts with the help of activities given in the text. It was mainly used for explaining the content of the lesson irrespective of the subject.
- The results indicated that there is a need to reduce teacher talk and increase the time for interaction with the students, performing group work and assessment of learning for improving learner performance.

Recommendations

- The RMSA teachers should be oriented well by the experts in the use of problem solving and constructivist approach in the classroom processes.
- The in-service teachers should be trained and motivated well in various skills of teaching such as introducing the lesson, asking questions during classroom transactions, posing a problem, organizing group activities, evaluation techniques, etc.
- There is need for intensive training and empowerment of teachers in the use of hands on activities, demonstration method, investigatory and use of ICT in facilitating learning.
- There should be regular follow-up and monitoring of the training including classroom observation by the district level education officials and RMSA functionaries.

- Teachers need to be encouraged and motivated to organize teaching by creating a learner friendly and enabling environment in the school.
- Every effort should be made to organize context specific teaching-learning and relating the textual knowledge with the daily life experiences. Teachers should plan and organize outdoor activities with whole class or in groups of students.
- Teacher's capacity development and ensuring that they engage learners in active learning by advance preparation of their lessons and delivering it effectively is the key to quality education.
- The schools and educational administration should keep track of teachers training needs and their capacity development programmes.
- For the teaching of science, Math's and Social Sciences resource rooms should be created and should be used in all the secondary schools.

Conclusion

Good practices must be shared with teachers and new emerging world in teaching should be recognized. There is a need to reduce teacher talk and increase the time for interaction with the students, performing group work and assessment of learning for improving learner performance. Teachers must be equipped with research activities and skill development programmes of the nations to motivate and contribute in research and in teaching learning process where to generate the knowledge the teacher makes use of scientific evidence to improve teaching activities. Teaching career should be taken as continuous research and development process. In-service training programmes need to plan very effectively and it should be implemented in phase wise manner at various levels.

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