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Bringing Reforms in Teaching -Learning Practices through Action Research

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Abstract: ***Research identifies Teacher Quality as the most important school related factor influencing student achievement. As rightly stated in NEP,2020 that the role of teacher is to shape the minds of younger generation. Teacher must be passionate, motivated, well qualified and well trained in content, pedagogy and practice. This paper presents the glimpse of the process and documentation of Action Researches by Pre-service trainees and practicing teachers of a district as to how it has enabled them to improve their practices and helped them grow professionally. An innovative project on' Action Research' by Pre-Service and In-Service Teachers have brought radical changes in School related Practices by developing a scientific attitude of solving the problems and becoming a researcher on their own .A Handbook on Innovative Practices Based on Action Research Projects by ETE and D.El.Ed students during their School Experience Programme has been published by us. It is an ongoing project and it emphasises on developing scientific temper among teacher –trainees and develop an inquiring mind. Action Research Proposals were developed by teachers and these were executed and published for wide sharing. Action Research practices are the world-wide global practices that are undertaken as quality initiatives. It is practiced globally in all areas including education for seeking solutions scientifically for improving the existing practices. Action Research should form an integral component of teacher education as envisioned in NEP to attract, build and sustain the best, passionate minds in teaching profession. This Paper gives a detailed account of how these action researches proposals were developed and executed by trainees and practicing teachers in the field and abstracts were written and documented based on the completed action research reports. The copies were disseminated in project schools for continuing such educational endeavours. It set an exemplar for teacher educators, teachers and students for evidence-based practices and motivated all to continue to explore, experiment and reflect on their school /classroom practices.***

I. INTRODUCTION

NEP, 2020 provides ample opportunity for experimenting and researching to grow personally and professionality in education sector. Teachers have a major role in implementing the policy in classroom. The policy envisages to have best minds in teaching profession who are passionate and innovative. Overhauling the Pre-service courses from 2-year D. El. Ed. /B. Ed to 4 -year integrated course.

Teacher as researcher and the concept of life-long learning are key highlights for improving learning outcomes .

An Individual teacher often explores new ways of transacting the curriculum to address the needs of students within their specific classroom context. These creative and innovative ways of teaching and learning can be promoted and encouraged during pre-service teacher – training. Action Research is one area which can offer ample opportunities to trainees to improve school practices. The recent National Surveys and Researches have raised serious issues and concerns related to students' achievement and school practices.

Hence Teacher - Preparation process is one key component in bringing qualitative improvement in Education. Despite several initiatives taken by Government to arrest drop - out rate at primary level, the situation is still very dismal. The research findings suggest that lack of infrastructure, unattractive surroundings, high teacher-pupil ratio remain the common causes of low achievements and drop out, but the teacher still plays the most important role in ensuring student retention in education system. Besides the content orientation, trainees undertake three months School Experience Programme in each year where they have to undertake various projects and assignments. '**Action Research**' is one of the marked assignments which is taken up by trainees in their respective allotted schools where they try to identify problems, develop Action Research Proposal, conduct it and arrived at solutions.

Action Research - A Perspective for Teacher Educators

Action Research - Its Relevance in School Education

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Action Research is one of the integral components in the 'Teacher-Training Institutes'. Trainees get practical orientation to find solutions to their day-to-day problems and practices in school environment in a scientific manner. Its purpose is to improve school practices. The approach of action research is to encourage the Teachers, Administrators and other Practitioners to do research in order to improve them. It promotes and develops inquiring mind and helps to deal with teaching - learning practices by applying research based strategic intervention to find feasible solution. Every teacher should be a researcher. Compared to pure research, action research is performed at comparatively low level of scientific sophistication and cannot be generalized. Having limited generalizability, it may, however provide hypotheses for more careful research elsewhere or at a later date.

Action Research is known by many other names, including *Participatory Research, Collaborative Inquiring, Emancipator Research, Action Learning, and Contextual Action Research*, but all are variations on a theme. In simple worlds action research is "*learning by doing*" *- a group of people or a person identifies a problem, do something to resolve it, see how successful their efforts were, and if not satisfied, try again.* There are other key attributes of action research that differentiates it from common problem-solving activities that we all engage in day- to -day life. NEP 2020 also emphasises on developing teachers as researchers and become solution seekers to improve their classroom practices/school practices.

A. Action Research gives educators new opportunities to reflect and assess their teaching also

1) To explore and test new ideas, methods and materials;
2) To assess how effective the new approaches are;
3) To share feedback with fellow team members;
4) To make decisions about which new approach to include in the practice.

The modern advocate of Action Research is John Elliot, who was the co-ordinator of a project titled "Classroom Action Research Network" (CARN). He has been an active supporter of the idea 'Teachers as Researchers'.

B. If you Want Truly to Understand Something, try to Change it.

It is based on the following Assumptions:

1) Teachers and Principal work on the problem they have identified for themselves;
2) Teachers and Principal become more effective when encouraged to examine and assess their own work and then consider ways of working differently;
3) Working with colleagues help teachers in their professional development;
4) Teachers and Principal help each other by working collaboratively.

Action research is carried out within the context of Teachers' Environment that is with the students and at the school in which the teacher works on questions that deal with educational matters at hand. It is Implicit in the Action Research that those teachers will begin a cycle of posing questions, gathering data, reflection and deciding on a course of action. When these decisions begin to change the school environment, a different set of circumstances appear with different problems posed, which requires a new look

C. What is Not Action Research?

Action Research is not a Library Project where we learn more about a topic that interests us. It is not Problem- Solving in the sense of trying to find out what is wrong, but rather a quest for knowledge about how to improve***. Action Research is not about learning why we do certain things but rather how can we do things better.***

In order to expose the D. El. Ed II year students to the Action Research Practices, the Project was undertaken. The objectives are specified as under:

1) To orient Trainees with the basics of Action Research, steps and procedures. (The Theoretical Rationale and Basic Philosophy of Action Research).
2) To enable them to prepare Proposals of Action Research based on identified area to be undertaken and completed during their three months School Experience Programme.
3) To prepare the Compendium based on the selected Action Researches by D. El. Ed. Students
4) To document the best/selected Action Researches undertaken by E.T.E. students.

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II. METHODOLOGY

The E.T.E. students were oriented through the following activities:

A. Workshop-cum-Orientation on Theoretical Perspective of Action Research

Before the School Experience Programme, the E.T.E. trainees are oriented on various projects and assignments that are undertaken by them during their School Experience Programme (SEP) in their allotted schools. Undertaking Action Research in these selected areas was given as an assignment for which marks/ weightage was assigned. Series of lectures and workshops were organised for developing an understanding about "What Action Research is and why teachers should be Action Researcher". The workshop was attended by DIET Faculty as Academic Supervisor for about 5-10 students in School Experience Schools allotted to them. The objective was to work as team, to guide and supervise trainees during the different phases of completing Action Research in their respective schools.

B. Development of Action Research Proposal Based on the Identified Problem Area

Trainees were oriented in developing Action Research Proposal based on a Simplistic Model:

1) Identification of a Problem.
2) Need & Rationale (Justification)
3) Objectives
4) Formulation of Hypothesis
5) Plan of Action (Preparation of Tools, Data Collection, Compilation and Analysis and Interpretation)
6) Findings of the study
7) Conclusions/Reflections.

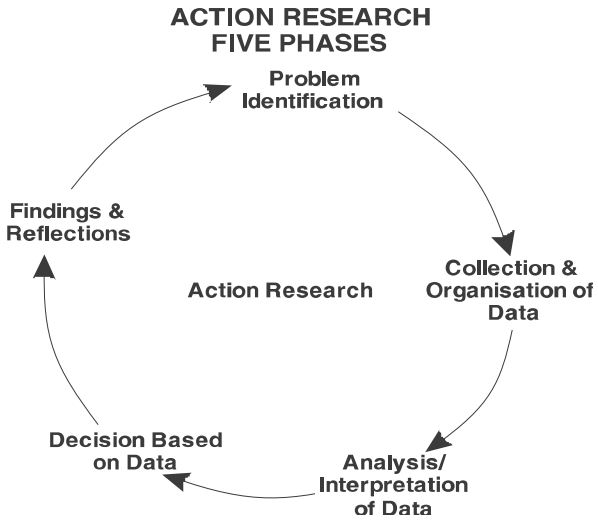
During the workshop at DIET, the students/trainees were divided in a group of 7-10 students and on the basis of a hypothetical problem (as these were E.T.E.-II-year trainees, they could anticipate Government school environment based on their First year Internship in schools), they were oriented to develop an "Action Research Proposal" following the steps mentioned above.

Students were asked to first spend 15-20 days in observing the school surroundings, culture and climate of school, functioning, teaching- learning practices and the students of the class which were allotted to them for teaching. During this time they would be able to identify and select the problem area for undertaking the Action Research Project.

Identification of problem is the most important step as the whole process depends on it. Action Research is more of a holistic approach to problem solving, rather than a single method for collecting and analysing data. Thus, it allows for several different research tools to be used. As the project is carried out, various methods which are generally common to the qualitative research paradigm include: *Keeping a Research Journal, Document Collection and Analysis, Participant Observation Recordings, Questionnaires, Surveys, Structured and Informal Interviews, Focussed Group Discussions and Case Studies etc.*

Students identified and made the Action Research Proposal, discussed with their supervisor and co-ordinator for clarity and focus.

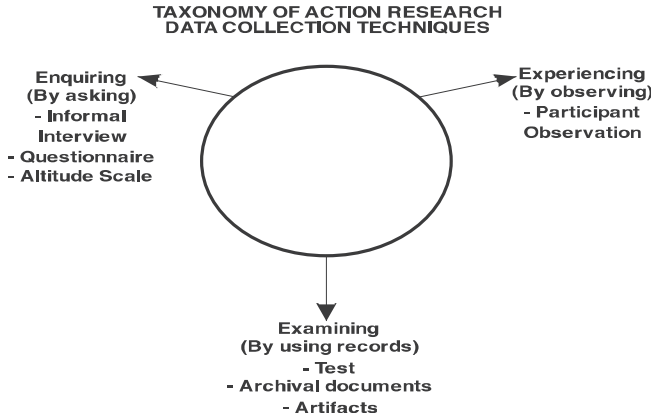
Students were oriented by giving them phase wise preparation of Action Research Proposal and its Execution which is given below:



1) *Phase I: Identification of Problem*
a) Introduction
b) My context (Background Information: setting, population, school, class)
c) What is my concern? (Research Question)
d) Rationale of the research (Why am I concerned?)
e) Review of Literature / Experiences (What experiences can I describe to show why am I concerned?
f) Statement / Title of the problem (Is the problem stated clearly and in the form of a question? Is it broad enough to allow for a range of insights and findings? Is it narrow enough to be manageable within my timeframe and my daily work?

2) *Phase II: Plan of Action*
a) Will I develop and implement a new strategy or approach to address my question? If so, what will it be?
b) Will time permit for what I am trying to accomplish?
c) What can I do about it? (Or, Objective of the study)
d) Hypothesis (not essential)
e) What will I do about it?

3) *Phase III: Data Collection*
a) Why are we collecting data? What exactly are we collecting?
b) What kind of data will I gather in order to answer my question?
c) What kind of tools and techniques will I use to answer my question? (Surveys, checklist, interview schedule, Diaries, portfolios, field notes, videotapes, audio tape, questionnaire, photography, observation schedule, case studies etc.).
d) How will I ensure that I have multiple perspectives?
e) Will it disrupt normal routines? (WHEN and WHERE are we going to collect the data and for HOW LONG?)



4) *Phase IV: Analysis of Data*
a) What can I learn from the data? What patterns, insights, and new understandings can I find?
b) What meaning do these patterns, insights, and new understandings have for my study?
c) How will I evaluate the validity of the evidence?

5) *Phase V: Plan for Future Action*
a) Future directions: Where do I go from here?
b) How will I modify my concern, ideas and practice in the light of evaluations? (Reflections on action research process, separate from the topic)
c) What might I recommend to others?
d) How will I write about what I have learned so that the findings will be useful to me and to others?

III. CONDUCTION OF ACTION RESEARCH

Following the steps and plan of action for finding out the real cause of identified problem and finding solutions to resolve it, the project was carried out by ETE Students in their respective schools.

IV. PREPARATION OF ACTION RESEARCH REPORT AND SUBMISSION.

Tentative outline for preparing the Action Research Report was given, which is as under:

1) Title of the project
2) Need and Rationale
3) Objectives
4) Action Hypothesis
5) Method and Procedure -Plan of Action, elaborating plan of Action on Sample, Teacher-made/self-Developed Tools, Data Collection, Analysis and Interpretation.
6) Data collection and Interpretation
7) Findings of the study / Reflections

V. VETTING, COMPILATION AND SELECTION OF ACTION RESEARCH REPORTS FOR DOCUMENTATION

The completed Action Research Reports submitted by trainees were vetted by External Experts from NCERT and few good practices were selected for documentation. This compendium is compilation of 20 selected Action Research undertaken by II year Students in an abstract form which are written by panel of experts based on the reports submitted by trainees. It contains the innovative practices based on Action Research undertaken by them in their respective schools during School Experience Programme (SEP).

A. Action Research Projects

Trainees developed their own tools for data collection including Questionnaires, Activity/worksheets etc. Self-developed tools used by ETE students com for data collection have been given at the end of respective projects. Some have held Focussed Group Discussions with Principals, Teachers and Students of the School. The sample size at elementary classes (VI-VIII) ranged from 40-50 students in the class. The Action Research Projects taken up by ETE Trainees are presented in abstract form in print.

*List of Action Research Projects completed by D.El.Ed and ETE Students

1) Development of Speaking Skills
2) Problems in Reading
3) Non-Usage of English in Simple Day-to-Day School Activities
4) Writing Skills among Students
5) Improving Students Ability to Paraphrase
6) Can Paraphrasing help students Understand better A Difficult Text?
7) Division of Fractions
8) Use of Mathematics Kit
9) Students 'Liking for Different Subjects
10) Motivating Students in Learning Science Skills
11) Problems of Indiscipline among Students
12) Strategy to Tackle Latecomers
13) Gap between Teacher and Students Leads to copying Habits
14) Truancy – A Precursor to Future Problems
15) Mid-Day Meal: The Right of a Child
16) Distribution of Mid-Day Meal Creates Disturbance in Classes in Schools
17) Bunking by Boys
18) Development of Map Skills
19) Problems of Indiscipline
20) Problems of Bullying

It was only the beginning of student's involvement and initiation as the next issue containing Action Research Projects in their respective schools during School Experience Program .

II. ACTION RESEARCH - A PERSPECTIVE IN CAPACITY BUILDING OF TEACHERS (IN-SERVICE)

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B. Action Research for Assistant Teachers of South District

A Project entitled Documentation and Publication of Action Researches by In-Service Teachers at Primary Level was taken up by DIET. 5 Day Training-cum-Workshop was proposed to orient theoretical rationale and formulation of suitable Action Research Proposals which was completed in Two Cycles. (*Based on Split Model*)

Selected Action Researches by Practicing Teachers were shortlisted for vetting and printing.

Follow -up -The component of Action research should continue to form the part of teacher -training courses to as suggested by all trainees and practicing teachers who participated in the process .It greatly enabled them to look in to the problems related to school/classroom practices from a new perspective and delve scientifically to find the solution .Formulating hypotheses provided them insights and reflect their practices .Teacher made tools to resolve was found by them as path breakers and improved their teaching skills .Exploring and interacting in collaborative research like dealing with indiscipline in school, Bullying ,Absenteeism, building good inter-personal relationships brought the teachers together and helped creating a caring culture that has been greatly emphasised in NEP,2020 . Policy stresses on attracting best and critical minds in teaching profession who will take this teaching profession passionately in its effective implementation. Suggested blended learning teacher training programmes (MOOCs) for CPD of teachers and school principals, with at least 50 hours of CPD can have this component as the integral part of In-service. Best practices by way of Action Researches may be published as compendium as District/State level to motivate teachers and teacher-educators to keep experimenting and researching to improve his classroom practices as a continuum.

VI. CONCLUSION

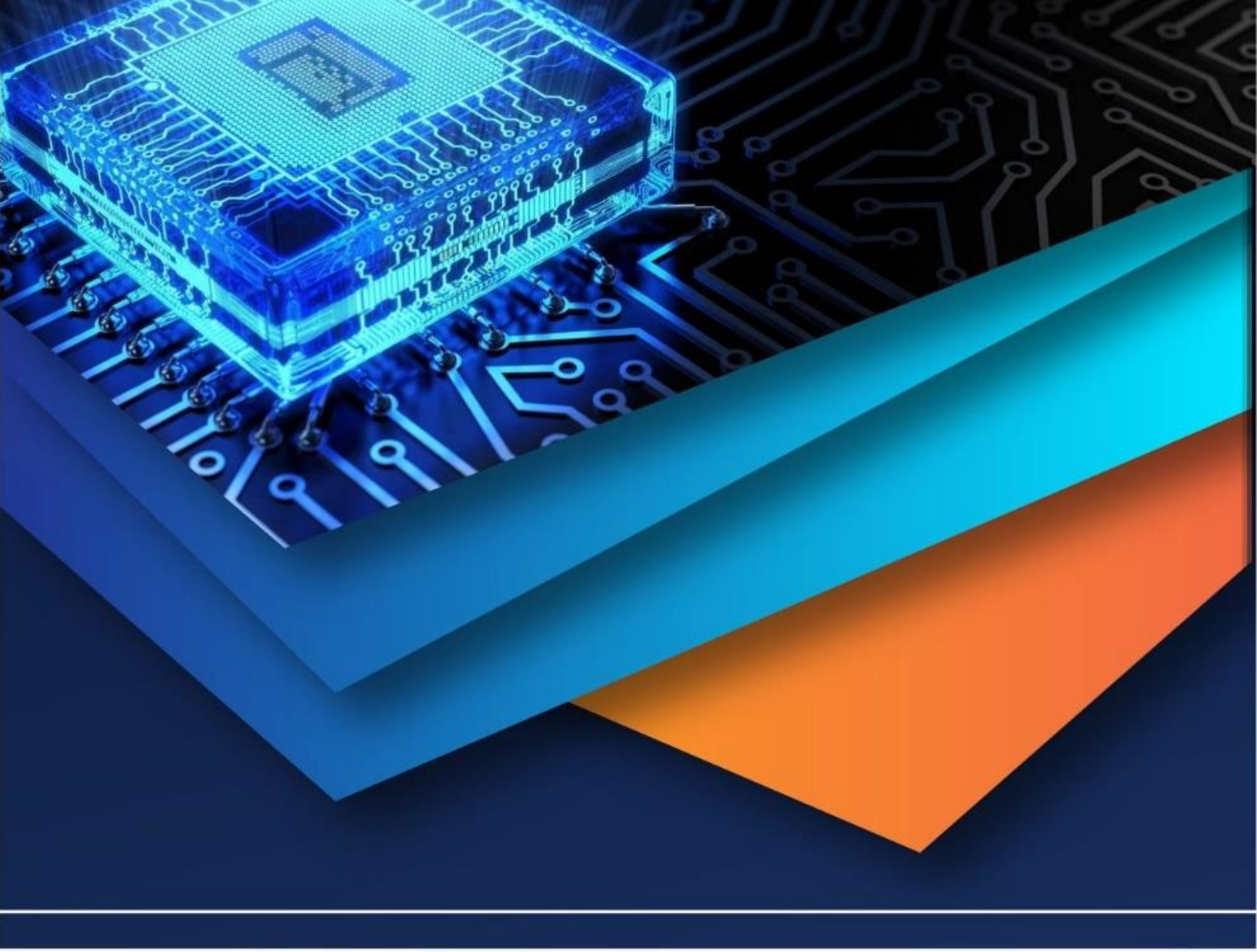
The above reflected in increased self -esteem among trainees and confident about resolving the school related /class related issues on their own .The teacher enthusiastically experimented with this and found the collaborative Action Researches helpful in enhancing their professional competence and bringing the team spirit among teachers in the school .The documented Action researches provide evidence based interventions for prospective trainees and gives an area to explore and research for practicing teachers .The Action Researches must be encouraged in Teacher -training Institutes and Schools to bring quality education in true spirits .It showcases the students work as well as develops an enquiring mind which is the need of the hour and helps achieving the optimal utilisation of available resources in education .As rightly stated in NEP ,2020-promotion of teacher based on merit ,rather than on seniority having options of vertical mobility where high performing teachers can be promoted to work at district or state level ,practices like Action Researches enable teacher to enhance their professional competence to become an effective teacher. Documenting the best practices will pave the way for evidence-based researches for quality education and motivate various stakeholders in teaching community.

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