Impact of D.El.Ed. Programme through the Distance Mode in Mathematics Teaching in Elementary Schools

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**ABSTRACT**

In Assam, the Right to Education Act (RTE, 2009) came into force on April 1, 2010. It was reported that a substantial section of teachers in Assam in Elementary Schools are untrained. Moreover, the recently appointed TET qualified teachers also do not have formal teacher training except a few with B.Ed. degree. As per direction of education department all such untrained teachers need to be trained within 2015. The Govt. of Assam decided that the untrained teachers should be trained through Distance Mode of Education. Krishna Kanta Handiqui State Open University (KKHSOU), Assam was entrusted with the responsibility of framing the curriculum etc.

The ‘Diploma in Elementary Education’ (D.El.Ed.) programme through the distance mode offered by KKHSOU is the first of its kind at the Elementary education level in Assam. This paper discusses the challenges and opportunities of this arrangement within the context of the country’s needs for teachers. Specifically, the paper examines the opportunities of increased access to higher education and attainment of equity. Based on the findings from the study it is felt that the D.El.Ed. Programme would adversely affect the teacher’s quality. It is therefore argued that the success of distance education program will depend on improved perception, more commitment from all stakeholders as also appropriate training.
Teachers in any society play a vital role in the growth and development of the individual child. More importantly, primary school teachers have a great responsibility for developing child education. Primary education lays the basic foundation for all other higher levels of educational development. It is, indeed, a pre-requisite for higher education. Elementary education should be given the highest priority because this is the children’s stepping-stone for pursuing higher goals. Elementary education will serve as their primary weapon against illiteracy. Needless to say Elementary education is of utmost importance, as everything a child learns in these early days will be reflected as they get older. The importance of elementary education is further supported by the National Curriculum Framework (NCF, 2005) wherein it was emphasized that “elementary education is a fundamental right of every child”. Because primary education is so vital in every person’s life, primary school teachers should be well trained so as to enable them to develop the children physically and mentally. Developing countries have recognized the importance of improving the quality of primary education for economic development and transmission of technical skills at later stages.
In Assam, the D.El.Ed. Programme through the distance mode offered by KKHSOU was first introduced in the training of elementary school teachers in 2012 in order to meet the critical shortage of primary school teachers by the expansion of the education system. Teacher education has become a topical issue in the most of the developing countries. Many teachers are untrained or under-qualified or they are teaching such subjects for which they are not qualified or trained. The demand for teachers in Assam is rising for fulfilling the targets of ‘Education for All’ and increasing number of student enrolment. The question to be addressed in this paper is: Can D.El.Ed. Programme through distance education quantitatively and qualitatively meet the demand for teachers?
Research Method
The case study reported here had two interwoven strands: in one, the course participants learned to research their classroom practice. Their focus was to examine the use of the selected strategies introduced in the course, for the improvement of their own teaching. Secondly, few tutors were involved for assessment of the impact of their classroom teaching based on the accounts of the students. The primary objects of the tutors was to examine the impact of their teaching after they implemented the new method and strategies facilitated by D.El.Ed. Programme in the classroom context. The study was seen as an appropriate approach to study impact to understand how and if in-service teacher education brings about a change in the classroom. Prof. M. Fullan has shown that when new ideas and practices are introduced in schools and classrooms, they are interpreted and adapted by the teachers who put them into practice within the context of their own situation, existing beliefs and practices. Thus the movement from source inputs in teacher education programmes to students outcomes is an adaptive process. A spend of one month was utilized by the researchers for various field activities such as interactive sessions with teacher as well as students, classroom observations etc.
RESEARCH REPORT

The findings and discussions reported in this paper draw from work with teachers, Mr. Hussain, Ms. Kulkarni and Ms. Varati. They are newly appointed TET qualified teachers and completed 1st year D.El.Ed. Program offered by KKHSOU under the distance mode. They are teaching Mathematics in classes VI to VIII. These cases provide representative examples of issues and themes that emerged largely in all the classrooms.
The teacher Mr. Hussain looked at the use of concrete materials in mathematics classroom. He identified this area because he usually used concrete material to teach mathematical concepts but was not sure if he was using them effectively. He now wanted to study the process of using concrete materials to see whether they were used effectively so that learning was facilitated.
Ms. Kulkarni also use of concrete materials, as students in class VI worked at mathematics tasks in small groups. She said “I have not used this approach to teaching which I am using now after my training (D.El.Ed. Program). Children won’t be able to learn until they do it themselves and until they do get a chance to touch it themselves.”
Ms. Varati introduced group works such as small group work incorporating some elements of cooperative learning strategies. From the observations it appeared that her purpose of introducing group work was to enable each member of the group to share her ideas about the task and develop mathematical thinking in the process.
Students Outcomes:

The study provided immense opportunity to see how the student learning outcomes were impacted. Here outcomes have a broader focus that includes academic achievement, students’ participation, and development of social skills. It is necessary to mention about this broader focus that the D.El.Ed. Programme gave a lot of emphasis on encouraging students to develop skills and attributes in order to enable them to work cooperatively with their classroom peers. When students were engaged in doing mathematics tasks in the classrooms where the teacher involved used concrete materials, there was a great evidence of positive impact on their learning process and outcomes.
In one class, Mr. Hussain gave the students cutouts of different types of triangles and asked them to measure the interior angles of the different shapes. He planned that once the students measured all the angles, he would ask them to add all the angles to explore the sum of angles of a triangle.

Ms. Varati started the topic mensuration. She taught them the method of solving the problems related to surface area of cuboids. After that she asked the students to solve the problem in their respective groups. She then engaged them in sharing their solutions with the class. She compared the students’ present classroom learning about the topic with their previous learning, she found a clear difference. Now that they talked in small groups, they were learning with understanding, asking related questions to overcome their misconceptions.
Teachers Outcomes

A great change was notice in the performance of their teaching as well as in the learning outcome after they upgraded themselves with D.El.Ed. Program. It was evident from the analysis of classroom data that during the process of implementation of new methods and strategies, the teachers created such a situation where students worked in groups and were encouraged to bring out their informal and contextual experiences, approaching questions through their own method. All these methods centered around the student’s active participation and involvement in their learning. As a result of these new experiences, the students demonstrated independence in their learning.
Conclusion

Training of quality teachers through distance mode is possible at any level. The distance mode of training is a sure way of increasing teacher supply, as well as increasing access to higher teacher qualifications in developing countries with limited resources for physical expansions of the education systems. There is, however a need for a curriculum that appropriately balances the professional growth of a teacher with a focus on classroom demands and his academic advancement with higher qualifications. In Assam, it is evident that the success of the distance teacher education program offered by KKHSOU will be measured by its impact on students’ achievement in their examinations at various levels.

The study also shows that the teaching strategies introduced as part of the D.El.Ed. Programmes have led to a positive change in the teachers’ classroom practice particularly in the teaching of mathematics. The new approach to classroom teaching has enabled the teacher to make their students learn better. The teacher has changed their role from just being a passive teacher to an active facilitator by participating in D.El.Ed. Programme.
Thank you