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Enhancing science knowledge of primary teachers through activity-based teaching

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The primary school is the foundation where students are prepared for learning science in the secondary stage. According to the education reforms introduced in 1997 the primary cycle of education consists of three stages. Science is included in the primary curriculum in the subject called Environment Related Activities (ERA.) This paper presents the influence of science knowledge of primary teachers at key stage one on students' learning and use of specially prepared activities in the teaching learning process.

A questionnaire was administered to primary teachers to understand the weaknesses in teaching science components in ERA. 13 classrooms were observed when teaching ERA lessons in three selected schools in Kegalle district. All the lessons were tape recorded and detailed fieldnotes were prepared. Interviews were conducted with randomly selected teachers to make clarifications of difficulties observed in classrooms. Data obtained from different sources

were analyzed using triangulation. It was found out that 95% of teachers were incapable of presenting science components of ERA lessons confidently and led students to have misconceptions. Activities were planned with teachers with lengthy discussions for the themes where teachers made mistakes in their explanation. The type of questions to be asked and the assessments were also discussed during the planning stage. These activities were tried out in five classrooms in the three selected schools. Necessary improvements of the activities were made with the help of feedback obtained from the teachers.

The discussions in the planning stage helped teachers to get a good understanding about the activities before working with the students. The students were very active in doing science as they were provided opportunities to improve the skills with proper guidance. The teachers also appreciated the changes in their classrooms. It is necessary to organize continuous collaborative work with primary teachers to strengthen the science knowledge and capabilities of them.

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