

## PRIMARY SCHOOL TEACHERS' UNDERSTANDING ABOUT SCIENTIFIC INQUIRY

*Dr Kalyani Akalamkam*

*Assistant Professor, Department of Elementary Education, LSR College for Women, University of Delhi, India*

**Received: 03 Jan 2020**

**Accepted: 06 Jan 2020**

**Published: 11 Jan 2020**

### ABSTRACT

*Development of Scientific Inquiry (SI) is one of the major goals of science curriculum. However, understanding about scientific inquiry is very complex as it is often misconstrued that doing experiments and hands on activities automatically promotes scientific inquiry. Review of research indicates that students across all levels have naïve and underdeveloped views about scientific inquiry. Like Nature of science (NOS), lot of studies have been done to probe students' and teachers' understanding about SI and various assessment tools have been evolved to measure the same. VASI questionnaire developed by Lederman et al (2014) is one of the most widely used for a meaningful assessment of SI in learners. As teachers play most important role in developing SI in learners, it is important to know their views and how they incorporate in their classroom discourse. Contrary to the popular view, SI can be promoted in the young learners of primary classes. However, it is possible only if teachers have informed understanding about SI. This paper attempts to find out primary school teachers' understanding about SI specifically in the context of teaching-learning Environmental Studies (EVS). The study is conducted as a part of the in-service teacher professional development program. It is found that majority of teachers have 'mixed' and 'naïve' views about SI*

**KEYWORDS:** *Scientific Inquiry, Nature of science, Environmental Studies*

### INTRODUCTION

Scientific inquiry is central to the discourse of science education. Scientific inquiry entails using a variety of science process skills, creativity, and critical thinking to develop scientific knowledge (Lederman et al 2014). The definition of SI is broad and refers to “diverse ways in which scientists study the natural world and propose explanations based on evidence derived from their work” (NRC 1996, 2000). Research on Scientific inquiry reveals that there are three ways in which scientific inquiry can be interpreted-what scientists do, how students learn and a pedagogical approach that teachers use (Minner D.D, Levy A.J 2010). The first aspect addresses conducting investigations using scientific methods, the second aspect concerns with students learning using inquiry approaches, and the third aspect deals with pedagogical approach involving teachers designing activities which support inquiry teaching and extended investigations. The second and third aspects have important implications for science curriculum and pedagogy. Research reveals that Nature of Scientific Inquiry (NOSI views) of the majority of students at all levels are naïve and undeveloped (Lederman et al., 2019; Lederman, 2012). In this context, teachers play the most critical role in the process of promoting scientific inquiry and scientific literacy by adopting scientific inquiry in their own classroom discourse. Reforms in the science education suggest that science teachers need to understand the nature of scientific inquiry and its central role in science pedagogy. Research also indicates that scientific inquiry is often misunderstood as doing inquiry activities in the class or engaging in inquiry