

CONSTRUCTIVIST PEDAGOGY IN LEARNING OF SCIENCE - A STUDY OF PERCEPTION OF TEACHERS AND PUPIL –TEACHERS.

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ABSTRACT

The present study aimed to investigate the prospective science teachers' (pupil- teachers'), teacher educators', school teachers' conceptual understanding of nature and pedagogy of science and the extent to which these perceptions were aligned with the tenets of Constructivist philosophy and pedagogy. There is no denying the fact that science teaching is still based on traditional and objectivist views of knowing and learning which assumes scientific knowledge to be a absolute and infallible. Science pedagogy, based on such positivist views involves direct transmission of information to learners who tend to memorize it. Over past few decades, objectivism has been subject to criticism and consequently, *constructivism* evolved as a postmodern epistemology, which asserts that knowledge does not exist independent of the knower and is constructed when amalgamated with prior beliefs and experiences. Scientific knowledge, from constructivist perspectives is viewed as tentative, emerging, omnijective (subjective to a considerable extent), theory laden, imaginative and socio-culturally embedded.

▪ Population and Sample Groups

The population of the present study comprised of pupil-teachers, teacher educators, and school teachers teaching science in various schools of Delhi, India.

Sample groups of the study comprised of 310 Pupil-teachers of Science Stream studying in various teacher-training institutes of Delhi; 110 upper primary and secondary and senior secondary school teachers teaching Science in government and unaided schools of

Delhi and 30 Science teacher educators from various teacher training institutes (B.Ed) in Delhi.

▪ **Tool of the Study**

The objectives of the present study were realized with the help of a 50 –items five point rating scale (*Assessment on Nature of Science and its Pedagogical Perspectives*) comprising of two parts I and II , each having twenty five statements.

▪ **Major Findings of the Study**

The findings of the investigation revealed that majority of participants did not demonstrate informed (constructivist) views about nature and pedagogy of science. The general neutral rankings on the Likert Scale reflected that the respondents' had not developed adequate understanding about various elements of nature and pedagogy of science. The predominance of positivism in the views of preservice and in service teachers was also apparent from their agreement with some of the commonly established myths regarding epistemology of science

To conclude, now that we know that the science presented to learners has very little in common with the 'real' science, it's time we abandon the existing traditional and obsolete notions of science and scientific knowledge.