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Constructivist Science Teacher Education

Needs for PST

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Science is major area of human mental and practical activity which generates knowledge. That knowledge are important to understand the world around and are basis of important technological applications.

According to W. Harlen (2000 p.10) there are two significant aspects that set the way the teacher teach science – *the nature of science and the view of learning*. They determine and are implicit in all decisions that teacher makes.

If science and science activities are comprehend as being the application of principles and skills which first have to be learned, the aim of science education are convinced as begin mainly to teach these principles and skills. In this case the chiefly role of teaching science is then seen as being to demonstrate the skills and to corroborated principles. That view of science can be described as: having a determinate subject matter, having defined methods, being value-free, objective and tell ultimate truths.

If science is understand as developing understanding through testing ideas against evidence through using a wide range of methods of enquiry this will lead to varied ways of teaching science. Science will be accepted as human endeavour to understand and describe the physical world. The scientific knowledge will be seen as tentative, always possible to be changed if there are new evidence challenging them. Science

will be accepted in social context and related to the values of the society. If this view is accepted from prospective teacher then the teaching will involve learners in process of developing understanding and in considering accepted scientific principles in this spirit.

The view of learning is the second main aspect crucial for teachers' action in class.

This view is based on knowledge and understanding that prospective teachers acquire from the courses psychology, pedagogy and methodology of science. Their own experience as students and observing lessons in class during teaching practice also has strong impact on building their view of learning. The prospective teacher view of how students learn influence the opportunities they are ready to provide for learning through interaction with materials and between them. If learning is seen as mostly receiving and mastering information then teaching will be organized to provide respect and attention to the authority rather than children developing understanding for themselves. Constructivist approach to teaching and learning presuppose student active acquiring of knowledge through building own meaning and be independent learners.

Summary

1. Prospective teacher need to develop and extend their understanding of what is science' as it influence all decision that teacher make.
2. Teacher's view of how students learn affect the opportunities they provide for meaningful learning through interaction with variety of materials, resources of information and interaction between students. Prospective teacher need further building and developing of constructivist approach to learning and teaching is the one that ensure this opportunities.

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