

Applicability of children's conception of 'conservation' and 'space' presented in Piaget's Cognitive Development Theory to Sri Lankan Children-

A case study on children between the Ages of 4 -8 years

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Background

Jean Piaget is the most renowned developmental psychologist who studied children's cognitive development. Much of Piaget's theory was found on the problems he presented to children of different ages. Based on this theory he described how children develop cognitively through four different stages. His theory has influenced early childhood education throughout the world. The applicability of his theory to different cultures (Greenfield, 1976, Lonner&Malpas, 1994, Ojose 2008) has been studied in many countries. The Open University of Sri Lanka conducts a certificate programme for the Pre-School teachers and 'Development of mathematical Skills' (is a compulsory course in this Programme. The content of this course is mainly based on Piaget's cognitive development theory. Content of the subject Mathematical concepts in the pre-School teacher training programmes conducted by the National Institute of Education and Eastern University of Sri Lanka is also based on Piagetian concepts. In this context, this paper examines the applicability of two mathematical concepts in his theory to Sri Lankan children.

Research Problem

Piaget's theory has been criticized for the methods he used in his research. One such criticism is that his conclusions are based on observations of his own children. Another is that he has used small samples. Since environment also plays an important role in children's development the question arise whether his findings could be generalized to a larger population or different cultures. The impact of Piaget's

Cognitive Development Theory in the education of our children is evident in our curricula related to primary and early childhood education. Therefore examining the applicability of children's conception of 'Conservation' and 'Space' concepts presented in in Piaget's theory to Sri Lankan context is the problem investigated in this study

Objectives

The main objective of this study is to examine the applicability of children's conception of 'conservation' and 'space' presented in Piaget's Cognitive Development theory to Sri Lankan children between the ages of 4 to 7 years. The specific objectives are to examine the applicability of the conception of above mentioned concept in relation to ethnicity and social sectors (urban, rural and estate) of Sri Lankan children.

Research Methodology

The research methodology and theoretical framework for this study is largely based on Piaget's Cognitive Development Theory. Piaget constructed fifteen instruments for each of the concepts conservation and space and used observations. This study also used tests similar to Piagetian tests with children between 4-8 years while observing their performance to achieve the objectives of this study. The sample of this study consisted of 60 children from different age levels (5 years to 10 years) and different social sectors (Urban, Rural and Estates).

Findings

The results of the study indicated that, there was no significant difference between Piaget's findings and the researcher's findings on children's conception of above mentioned concepts. There was also no significant difference among social sectors or two main ethnic groups Sinhala and Tamil. But the children's conception of both conservation and space in the estate sector was slightly higher than that of the children of urban and rural sectors.

The findings also indicated that Sri Lankan children's conception ability in both conservation and space increases with their age. This finding is similar to Jean Piaget's findings. But the performance of Sri Lankan children was slightly higher than the performance of Piaget's sample.

Conclusion

It can be concluded that the conception of Conservation and Space concepts presented in Piaget's theory is applicable to Sri Lankan children.

References

Piaget, J. Inhelder, B. (1948) *The Child's Concept of Space*, (London: Routledge and Kegan Paul.).

Piaget, J. Inhelder, B. (1952) *The child's Conception of Numbers* (London: Routledge and Kegan Paul).

Wallach, L., Wall, A.J. and Anderson, L (1967). 'The number conservation roles of reversibility alone and addition subtraction and misleading perceptual cues'. *Child Development*, Vol.38

Wood, Smith and Grossniklaus 2008