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Construction of an Assessment Tool for Early Childhood Development in the World of DiscoveryTM Curriculum

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Abstract : Early Childhood assessment tools must measure the quality and the appropriateness of a curriculum with respect to culture and age of the children. Preschool assessment tools lack psychometric properties and were developed to measure only few areas of development such as specific skills in music, art and adaptive behavior. Existing preschool assessment tools in India are predominantly informal and are fraught with judgmental bias of observers. The World of Discovery TM curriculum focuses on accelerating the physical, cognitive, language, social and emotional development of pre-schoolers in India through various activities. The curriculum caters to every child irrespective of their dominant intelligence as per Gardner's Theory of Multiple Intelligence which concluded "even students as young as four years old present quite distinctive sets and configurations of intelligences". The curriculum introduces a new theme every week where, concepts are explained through various activities so that children with different dominant intelligences could understand it. For example: The 'Insects' theme is explained through rhymes, craft and counting corner, and hence children with one of these dominant intelligences: Musical, bodily-kinesthetic and logical-mathematical could grasp the concept. The child's progress is evaluated using an assessment tool that measures a cluster of inter-dependent developmental areas: physical, cognitive, language, social and emotional development, which for the first time renders a multi-domain approach. The assessment tool is a 5-point rating scale that measures these Developmental aspects: Cognitive, Language, Physical, Social and Emotional. Each activity strengthens one or more of the developmental aspects. During cognitive corner, the child's perceptual reasoning, pre-math abilities, hand-eye co-ordination and fine motor skills could be observed and evaluated. The tool differs from traditional assessment methodologies by providing a framework that allows teachers to assess a child's continuous development with respect to specific activities in real time objectively. A pilot study of the tool was done with a sample data of 100 children in the age group 2.5 to 3.5 years. The data was collected over a period of 3 months across 10 centers in Chennai, India, scored by the class teacher once a week. The teachers were trained by psychologists on age-appropriate developmental milestones to minimize observer's bias. The norms were calculated from the mean and standard deviation of the observed data. The results indicated high internal consistency among parameters and that cognitive development improved with physical development. A significant positive relationship between physical and cognitive development has been observed among children in a study conducted by Sibley and Etnier. In Children, the 'Comprehension' ability was found to be greater than 'Reasoning' and pre-math abilities as indicated by the preoperational stage of Piaget's theory of cognitive development. The average scores of various parameters obtained through the tool corroborates the psychological theories on child development, offering strong face validity. The study provides a comprehensive mechanism to assess a child's development and differentiate high performers from the rest. Based on the average scores, the difficulty level of activities could be increased or decreased to nurture the development of pre-schoolers and also appropriate teaching methodologies could be devised.

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