The study represents an initial investigation of the relationship between logical operations deemed prerequisite to the development of conservation and acquisition of conservation. The hypothesis guiding the study was that special training on the acquisition of the logical operations described by Piaget is a necessary condition for children's ability to solve conservation of quantity problems.

Two groups of preschool children between the ages of 4 and 5 with IQ scores over 130 were involved. One group served as controls. Training procedures focused on logical operations. Changes in conservation of quantity, weight, and volume were found for the experimental group only. The study was replicated with similar results.

[The Social Sciences Citation Index® (SSCI®) indicates that this paper has been cited in over 50 publications, making it the most-cited paper ever published in this journal.]

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This study came about as a fluke. I noticed that the gifted children at the City and Country School in Bloomfield Hills, Michigan, did no better on conservation tasks than nongifted children. This was surprising since they were so bright.

Conservation is a principle which holds that an attribute retains its identity in spite of transformation. An example of conservation is the oft-quoted riddle, "What weighs more, a pound of feathers or a pound of lead?" Individuals who are conservers realize the amount is constant even though the material is different. Understanding this principle is vital for logical thinking, and hence, helping young children to understand this concept helps them in their development of logical reasoning.

Most training studies reported at the time indicated that children could not achieve the concept of conservation by any of the usual didactic training procedures and concluded that conservation acquisition was not amenable to training. My argument was that these studies failed because they did not train the children on the prerequisites. I contended that the children had to learn the prerequisites first, and, if they did, they could solve conservation of mass, weight, and volume without further ado. In general, one can only learn a new thing if the prerequisites are in place.

A review of the field provides information on trends since 1966. More recently, I have done work on distancing strategies.

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