The Link between Toddlers and Scientists

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The purpose of the project was to determine whether there is a link between the Visual Motor abilities of learners at pre-school and school performance later at high school, specifically in subjects like Mathematics and Science. Data capturing included collecting data from an Occupational Therapist who administered a series of perceptual motor abilities tests from 2005 to 2015 on preschool-learners from 10 pre-schools around the Goldfields-area in South-Africa; a total of 826 children's data were used. Averages were then calculated to determine the highest and lowest averages for each skill over the time period for all the children. A pilot study was conducted by means of interviews with 19 Grade 11-learners that were assessed in 2005 when they were in Grade R with specific emphasis on their current subjects and performances. The average of each specific Visual Motor ability was then taken, to determine the overall 4 lowest abilities amongst all 10 schools, over the 11 year-period. The performance of 19 grade 11 leaners in Mathematics and Science on their last exam was compared to their performance in Visual Motor ability tests conducted by the Occupational Therapist when they were at preschool 10 years prior. The data analyzed showed the 4 lowest Perceptual Motor abilities which also linked to the results of the 19 learners when they were at preschool. The overall average of Visual Perception- was also lower than the overall average of Fine motor skills and it was determined that more emphasis is being put on latter in the Grade R-curriculum. The hypothesis was accepted; this study has shown that Perceptual Motor ability at pre-school definitely has a link with high school-performance, specifically in Mathematics and Physical Science.

Awards Won: