

phases. The data of natural observations by the parent and a counselor were also collected. The results indicated that, by the end of the study, balance performance improved 24%, manual dexterity performance improved 38%, and handwriting speed improved 26%. Importantly, the results also showed that the baseline test performance in the reversal phase (pretest2) was sustained when the treatment was removed. In addition, the test results were consistent with natural observations suggesting that the improvements in the performance tests and handwriting may be related to the exercise intervention treatment.

The Effects of Subjective Estimation of Performance Outcome During the KR-Delay Interval on the Acquisition and Retention of a Motor Skill

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This study examined the effects of subjective estimation of performance outcome during the KR-delay interval on the acquisition and retention of a self-paced motor skill. Participants of this study were 28 male and female students from Springfield College, Springfield, Massachusetts. The task in this study involved putting golf balls toward a golf cup from a distance of 12 ft. A pilot study was conducted prior to the beginning of the experiment to determine the number of acquisition trials needed for participants to acquire the putting skill. Participants were randomly assigned to either an experimental group or a control group with equal number of men ($n = 9$) and women ($n = 5$) in each group. The experiment consisted of a pretest, an acquisition phase, and a retention test. Shortly after the practice trials, a pretest that involved 10 trials of the putting accuracy task without KR, was administered to all participants. Following the pretest, the participants were then instructed to perform 20 trials of putts. On each trial, the participant in the experimental group was asked to verbally estimate the outcome of the putting performance immediately after each putt and before receiving visual KR by indicating whether the golf ball would hit the hole or which of the four scoring zones it would come to a stop. The participant in the control group was not required to engage in subjective estimation of performance outcome during the KR-delay interval. A retention test involved 10 trials of putting performance under the same procedures used for the pretest was conducted 48 hr after completion of the acquisition phase. A 2×4 (Groups \times Trial Blocks) with repeated measures on the last factor was employed to examine putting accuracy of the two groups over the acquisition trial blocks. In addition, a 2×2 (Groups \times Tests) with the repeated measures on the last factor was used to determine group differences in putting performance on the two tests. The results of this study indicated that both groups demonstrated a similar level of task performance during the acquisition phase as well as on the pretest and the retention test. Postexperimental interviews revealed that the participants in the control group engaged in their own performance evaluation during the KR-delay interval. These findings suggest that the KR-delay interval is the time period for performance evaluation and performers engage in this process naturally. It is proposed that having learners engage in subjective estimation of movement form instead of performance outcome may be a better strategy to enhance motor skill learning.

Movement Skills of Young European American and Mexican American Children: A Longitudinal Assessment

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Gender differences in the motor skills of young children have been assessed frequently, however, few studies have examined ethnic variations in movement skill development over time. An improved understanding of skill development in ethnically diverse children may help in the design of appropriate intervention programs. The purpose of this study was to assess gender and ethnicity differences in the development of movement skills in a bi-ethnic cohort of 207 young children from low-to-moderate socioeconomic status families. Movement skills and adiposity in 89 European American (51 boys, 38 girls) and 118 Mexican American (53 boys, 65 girls) children were measured on three occasions, when children were 4.4, 5.6, and 6.6 years of age. One test each for agility and locomotion (hopping), manipulation (catching a ball), and stability (balancing on one foot) were measured in the child's home at each time period. Skinfolts (triceps and subscapular) were measured at the same times. Two-post, test-retest reliabilities were $r = 0.77, 0.78,$ and 0.62 for the hopping, catching, and balancing tests, respectively. *T* tests compared gender and ethnic groups on skinfolts, mean skill scores, and a computed skills index. Partial correlations, controlling for ethnicity, evaluated associations among variables. Significant ethnic differences were not found for skinfolts or any skill variable. Boys had lower mean skinfolts ($p = .002$) and scored higher on the skill index ($p = .001$) and catching ($p = .002$). Girls scored higher on balancing ($p = .007$) and hopping ($p = .0001$). Gender differences on balancing and hopping were reduced as the children moved from ages 4 to 6 years, indicating boys were improving faster on these skills than girls. As expected, children within each of the four subgroups improved their skills as they aged. Skill performances tracked over time at low levels for both boys ($r = .30$ to $.41$) and girls ($r = .16$ to $.24$). Correlations between skills at age 4 and 5 were generally stronger than between ages 4 and 6. Inter-skill performances on hopping, catching, and balancing were significantly related for boys ($r = .27$ to $.51$) and girls ($r = .36$ to $.40$). There was a significant negative association between skinfolts and boys' ($r = -.29$) and girls' ($r = -.21$) ability to balance and boys' ability to hop ($r = -.21$). The results related to gender differences and tracking support the findings of previous motor development studies. The data suggest few differences exist in the development of movement skills of young children from European American and Mexican American families living in low-to moderate SES communities.

Dynamic Visual Acuity and Coincidence-Anticipation Timing in Girls at the First and Fifth Grade

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Dynamic visual acuity and coincidence-anticipation timing are dynamic factors of the visual system. Researchers (Beals, Mayyasi, Templeton, & Johnson, 1971; Morris and Kreigh-