RETRIEVAL OF CONTINUOUS EXERCISE MOVEMENT SERIES WITH VARIOUS TEACHING METHODS: THE CASE OF GENDER

Fügedi Balázs¹, Bognár József², Kovács T. László³
(Collage of Károly Eszterházy¹, Semmelweis University, Faculty of Physical Education and Sport Sciences (TF)², Collage of József Eötvös, Department of Art, Technological and Physical Education, Baja³, Hungary)

Child's development, motor learning and the specific accounts for gender differences have been examined through physical development and motor ability tests. A number of studies assessed motor learning and student-teacher interaction to in order to make teaching more efficient. However, only few studies examined the effectiveness of continuous exercise movement series as related to motor learning, gender differences and different teaching methods together.

The purpose of this study was to examine gender's general conditioning performance in two experimental situations (ES) (7 days after the movement learning, and 21 days after the movement learning) and the most efficient teaching method (Verbal, Visual, and Visual-acoustic) regarding motor performances for boys and girls.

Ten year-old students (N=30; 15 boys, 15 girls) were randomly selected in a suburban school in Hungary. Students' ability was examined in retrieving a general conditioning exercise series in two experimental situations: 7 and 21 days after the students acquired the movement set (ES1 and ES2). Error categories were divided into Error category 1 (EC1, errors altogether) and Error category 2 (EC2, only error types that are closely related to the peculiarities of motor memory). Both descriptive and analysis of variance (paired sample t-test, ANOVA) were performed to examine gender differences as related to ES1 and ES2, EC1 and EC2, and also in the three teaching methods.

Altogether, the retrieval of the continuous exercise movement sequence in ES2 (21 days) was significantly better than in ES1 (7 days) for the whole sample (p=.002). When looking at only error types related to motor memory (EC2), there were significant differences in girls' achievement: their retrieval was significantly better in ES2 than in EC1 (p=.004).

Visual-acoustic method was significantly more efficient for boys than for girls in EC1 in ES1 (p=.006) but there were no differences in ES2. There were no differences in girls' performance in neither ES1 nor in ES2 when contrasting for the three teaching methods. Regarding EC2, there were no differences in boys' achievement among the three teaching methods in both ES1 and ES2. However, acoustic method were most effective for girls in ES1 (p=.01).

It appears that length of time between ES1 and ES2 significantly and positively influenced the retrieval of motor performance. The complex visual–acoustic teaching method seems to be the best means, however, gender differences should be taken into account when teaching motor sequence. It seems that girls need more information channels (verbal, visual–acoustic) and time in this age than boys to achieve better achievement. Data suggest that boys’ retrieval is stronger shortly after learning, however in a longer period differences are compensated and gender differences are not relevant.

Keywords: Psychology, Teaching, Motor Learning

12th Annual Congress of the ECSS, 11–14 July 2007, Jyväskylä, Finland