



ADAPTED EUROFIT TESTS: REPRESENTATION OF PHYSICAL DEVELOPMENT OF DIFFERENT AGE CHILDREN GROUPS AT ST. KLIMENT OHRIDSKI PRIVATE PRIMARY SCHOOL – EXPLOSIVE STRENGTH

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ABSTRACT

The proposed study presents an adapted Eurofit test of explosive strength. It is used to monitor the development of speed in children groups distributed by age. The increase of the indicated quality has been established as a result of the test application during two school years. Reciprocity between age and achievement has been revealed.

Key words: physical development, physical quality, test – long jump from a place.

INTRODUCTION

Physical education is the only subject at secondary schools, which contributes to better learning of teaching material by students through physical activity and, to a large extent, limits hypodynamics associated with the stationary nature of other subjects.

The purpose of this study was to analyse the physical condition (baseline level) and physical development (end-of-the-year level) of children at primary and secondary schools, under the conditions of a private school, by studying the changes in two physical qualities. Two tests chosen were for speed and explosive strength, each being the subject of a separate examination. The study presented in this paper was dedicated to the explosive strength of lower limbs.

The object of the survey was children aged 6-13 divided into 2 groups: 6-8-year-old children including 78 participants (of which 35 boys and 43 girls) and 10-12-year-old students including 51 children (of which 28 boys and 23 girls). A separate analysis was made by the sex of participants. (It is imperative to keep in

mind the turnover of students during the school year.)

The duration of the study was one school year.

The survey tasks were:

- establishment of the students' baseline level;
- monitoring the learning process outcomes at the end of the school year;
- defining the change: positive or negative within the scores achieved during the entire school year.

METHODS

The methodology applied to the study of explosive strength is an adapted Eurofit test – a long jump from a place with two legs (1). With this study, the test was complicated with an element of duplication of one-cycle performance, the first jump being interpreted as coaching. Duplication but not a repeated jump was used to track the possibility of having "movement memory" and improve performance. The adapted presentation of traditional tests, even with a small change, was made on innovative purpose related to the aim of increasing students' interest in athletics. It is necessary to clarify that the test performed can be called "executive" as the aim was to establish children's natural abilities at the beginning and end of school year without any targeted training during the period of study.

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The scores of participants were processed statistically.

RESULTS AND DISCUSSION

In the initial course group (6-8-year olds) the average first-jump scores were very close ranging between 115-125 cm of the boys and 86-114 cm of the girls. These results were similar to those of the previously performed tests (2). The purpose of the examination was to trace the duplicated jump where the results were mostly negative. Nearly 68% of the students deteriorated their results, 22% retained them, i.e. there was a constant with movement, and only 10% or 8 children managed to win an increase of scores. Thus it was found that the test formulated in such a way with small pupils had mostly a negative effect at the baseline level.

After the Physical Education classes throughout the school year 2018/2019, the test was repeated. The results of both sexes were higher as single scores, slightly more significant of girls – 116-131 cm for boys and 101-124 girls. Again the duplicating jump did not prove to be necessary – only 15% of the girls and 18% of the boys improved their second jump or a totally of 12 students that formed 50% of the students who improved their second jumps in comparison to the results at the beginning of school year. However, the expectation of great improvements with the second jumps was not confirmed.

At the beginning of the school year, the first-jump scores in the group of intermediate course (10-12 years) were between 150-170 cm for boys and 135-148 for girls. More interesting results were obtained with the duplicate jump attack – 50% of the boys achieved equivalent length, i.e. the two successive jumps was identical in value. For girls this percentage was lower – 37%. The scores of jumps were improved by more than

1/3 of the boys and 1/4 of the girls. These results were encouraging to do a control test at the end of school year.

The exam was repeated at the end of the school year. The first jump scores showed a natural increase corresponding to the participants' age and skills increase: 156-181 cm scored by the boys and 140-155 cm scored by the girls. This growth did not apply to the duplication jump – the results were not improved, even a decrease of average scores was observed – 37% were equivalent and only 10% of the girls and 15% of the boys managed to get improvement. The reasons for this deterioration of scores in the second jump were rather complex: the entrance of participants into a new phase of their psychophysical development, body mass increase, insufficient physical activity in their own form, etc.

CONCLUSIONS

The conclusions, which can be drawn after the experimental test, are:

- the application of this modified test is unjustified, especially for younger pupils whose lower scores suggest that this test rather burdens the participants than benefits them;
- the test presentation to older pupils would have a more diagnostic effect than application to examine their physical condition;
- the interest that the test triggered to all students, even without achieving the positive effect sought, proved the great need to apply new approaches, new methods for teaching Physical Education, and analyzing the physical capacity of young people.

REFERENCES

1. Oja, P. (Author), Tuxworth, B. (Editor), Eurofit for Adults: Assessment of Health-Related Fitness, CE, 1995
2. Petkova, L., Kwartirnikova, M., Tests for Assessment of Physical Capability, Sofia, 1985