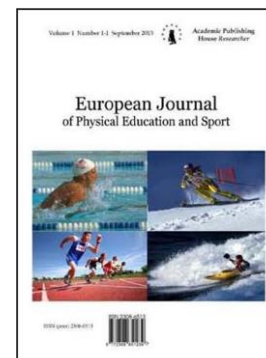


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Development Opportunities of Pupils Physical Abilities by the Interventional Program

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Abstract

The paper presents partial results of grant assignment which was focused on verifying an impact of the applied intervention program BUBO on second primary education stage pupils' of Slovak republic selected physical abilities during Physical Education. The intervention program was applied on the experimental group of pupils (n = 174) during the compulsory subject Physical and sport education. The BUBO intervention programme was created to develop condition and coordination abilities of elementary school pupils and it uses exercises from athletics, gymnastics, moving and sport games. The movement programme was implemented in the mainstream education twice a week. The effectiveness of the program was verified by standardized motion efficiency and flexibility tests. Within the descriptive characteristics of descriptive statistics we used for measures of position the arithmetic average (\bar{x}) and for measures of variability the (standard) deviation (SD). A normal data distribution was in all statistical analysis verified by the Shapiro-Wilk test. The F-Test was used when comparing the two dependent samples, while the degree of variance was checked with the use of a T-Test for the parity or disparity of the variance. In terms of data processing methods, we used the analysis and synthesis, inductive and deductive approaches and comparisons and generalizations. The most significant effectiveness of the experiment was recorded on the fifth gradepupils' aerobic and speed abilities. Positive changes of motoric tests were noticed in sixth graders' experimental group. Output results recorded statistically significant progress in all tested abilities.

Keywords: intervention program, pupils, motion abilities.

1. Introduction

In the educational process of physical and sport education in elementary schools, we see the implementation of various movement programmes aimed at motivating students to physical activity, also increasing general physical performance or developing physical abilities. One way to increase pupil's physical activity is to pay attention to the motivational climate and PE class pleasure, because the set of actors are related to the intention to be physically active students (Navaro et al., 2019). The enjoyment of physical activity is related to motivation, both of which have an impact on the level of participation in exercise and physical activity in physical education classes (Navarro et al., 2016; Hashim, Grove, Whipp, 2008; Wallhead, Buckworth, 2004). Some investigations present how physical exercise produces physical, physiological, and above all, psychological beneficial effects (Pivovarniček et al., 2019) and there are positive results in mental health (Fox, 2001; Alfermann, Stoll, 2000; Sonstroem, Morgan, 1989). We perceive the interest in

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following the effectiveness of various intervention movement programmes both – at home, and abroad. Tannehill et al. (2015) are concerned with case studies illustrating the global practices of programs for teaching physical and sports education for young children, influenced by various didactic styles. Simultaneously, they provide the teachers with the basic components necessary for their creation and realization. Sallis et al. (2009) from South California created the SPARK (Sports, Play and Active Recreation for Kids) intervention programme for students of the 4th and 5th grades of elementary school. The aim of SPARK, a research-based curriculum, is to improve the health, fitness, and physical activity levels of youth by creating, implementing, and evaluating programs that promote lifelong wellness. Each SPARK program “fosters environmental and behavioral change by providing a coordinated package of highly active curriculum, on-site teacher training, extensive follow-up support, and content-matched equipment focused on the development of healthy lifestyles, motor skills and movement knowledge, and social and personal skills” (SPARK, 2013). Authors Farris et al. (2011) present the study "A 12-week Interdisciplinary Intervention Program for Children who are Obese". The National Institute of Health set up a movement programme to improve children's health. The programme's content includes aerobic exercises in a form of entertaining activities and sport lessons led by certified professionals. Movement activity aims to develop balanced and strength abilities through seasonal movement activities, also with an effort to build a permanent positive relationship with movement. Debra et al. (2011), in cooperation with health professionals and teachers of the concerned schools, publish the results of the impact of the intervention movement programme called „PA TAKE 10!“, with an emphasis on the relationship between physical activity and the ability of elementary school children to achieve desired learning outcomes. Participating students achieved a higher level of physical activity, the time needed for study was reduced, and learning outcomes in maths and spelling were positively influenced ($p < 0.01$). Demetriou, Höner (2012) implemented a similar research, which was devoted to interventional physical activity in schools. Their results describe positive changes in the level of physical performance, physical activity and also in the general knowledge of physical activities. The programme "Daily Physical Activity in School" provides students with the opportunity to participate in all classes, including students with special educational needs, for at least 20 minutes of medium to intensive physical activity every day during the whole learning time (available on: www.edu.gov.on.ca). The authors Eather et al. (2013) confirmed the significant impact of the intervention programme Fit-4-Fun on health-oriented movement performance and the level of physical activity which was monitored by pedometers. Daubnerová (2017) developed the physical abilities by motion program. Sheehan, Katz (2012) found that among school-age children the use of active gaming added to development of postural stability, an important component of motor skills development. The main goal of the “BUBO” movement program is to support children's health, to use the sensitive period in an individual's life for the maximal development of his/her physical abilities and to develop the lifetime hobby of physical activity (available on: www.zsss.stranka.info). The authors Krull, Novotná (2015) also monitored the impact of the BUBO interventional movement programme on the movement performance of primary education students. They mainly focused on students' selected physical abilities. They also documented significant changes in the development level of running speed, with changes in direction and endurance ability in the whole research sample. Statistically significant positive changes were found in the level of flexibility of the girls, in the power ability of the lower extremities of boys, and the power ability of the abdominal and iliac-femoral muscles in first-year and third-year primary school students. The latest findings from the use of the BUBO movement program were also presented in other publications (Mandzak et al., 2018; Mandzák, 2018; Slováková, 2018).

2. Materials and methods

Participants

Our experimental group consists of 174 pupils at the second stage of elementary school; it is the 5th, 6th, 7th years of the elementary school in Ružomberok, Slovakia (Table 1).

Table 1. The overview of anthropocentric parameters of the 5th, 6th and 7th grade research groups of boys

Boys	height		weight		BMI	
	initial test	final test	initial test	final test	initial test	final test
5 th grade	145.88 ±6.16	149.60 ±6,50*	40.32 ±6.93	44.22 ±7,01*	18.67 ±2.80	19.75 ±2,74*
6 th grade	153.17 ±7.05	157.39 7.26*	44.72 ±10.99	49.47 12,06*	18.82 ±2.83	19.72 ±3,10*
7 th grade	159.61 ±8.56	165 ±9.65	50.50 ±11.12	54.42 ±12.15	19.68 ±3.20	19.87 ±3.36

Organizing

In the research we used a pedagogical experimental method. The experimental group received, within the standard education content including experimental stimuli, which took 32 weeks. The BUBO intervention programme was created to develop condition and coordination abilities of elementary school pupils and it uses exercises from athletics, gymnastics, moving and sport games. Its uniqueness is in organization of the types of movement, so it can be applied during the whole school year, without interrupting the main content of Physical Education and Sport. The movement programme was implemented in the mainstream education twice a week. The experimental exercises with content adjusted were undertaken within the first part for 10 minutes in every class. The main focus was intentionally given to developing condition (strength and endurance) and condition-coordination's abilities (movability and speed) by combining all games, exercises and activities while aiming to preserve the diversity of Physical Education and Sports lessons. The exercises that included the experimental factor were taught by the Physical Education and Sport teacher at the given school.

Procedures

- The back-saver sit & reach – flexibility test modified for right and left bend knee (Fitnessgram).
- Back-saver sit & reach (Moravec, 2002).
- The trunk & lift test in lying position on abdomen to test the flexor strength and flexibility of the lower back and hamstring muscles (Fitnessgram).

Data Analyses

Within the descriptive characteristics of descriptive statistics we used for measures of position the arithmetic average (\bar{x}) and for measures of variability the (standard) deviation (SD). A normal data distribution was in all statistical analysis verified by the Shapiro-Wilk test. The Paired-T-Test was used to identify the significance of the inconsistencies by examined indicators between initial and output measurements. In the case of rejection of a normal data distribution the Wilcoxon nonparametric test for 2 dependent samples was used. The probability of Type I. errors was in all analyses set at a value $\alpha = 0.05$. The F-Test was used when comparing the two dependent samples, while the degree of variance was checked with the use of a T-Test for the parity or disparity of the variance.

3. Results

The goal of our research is to verify the influence of the delivered content of the BUBO intervention programme within Physical Education and Sport lessons on chosen movement abilities of pupils at the secondary stage of elementary school.

Hypothesis: we assume that in the experimental group of all tested pupils the influence of the experimental factor will show statistically significant changes in back flexibility while the findings of the group will fulfil standards according to the assessment range FITNESGRAM.

Evaluation of flexibility of the lower back and hamstring muscles in the 5th – 7th grade pupils.

In this subchapter we deal with the shifts in backbone mobility, which were observed in tests: In the back-saver-sit & reach test with right and left bend knee, back-saver-sit & reach test and trunk & lift (cm). The results obtained from our measurements were statistically processed as well

as compared with the results of the general population of primary schools carried out by Moravec and col. (2002) and according to the Fitnessgram standards (Cooper Institute, 1999).

The level of the 5th grade pupils' mobility

In the Back-saver sit & reach test we were testing flexibility of the lower back and hamstring muscles, whereby the test was performed with both right and left legs. When performing the back-saver sit & reach test with the right bend knee, a statistically significant 3 cm ($t = 2.05, p < 0.05$) progress in 5th grade pupils was found (Table 2). In the test with the left bend knee, a positive shift was found. However, its value is not that significant because there was only a 0.79 cm difference. The experimental group of boys did not meet the Fitnessgram standard. Their average final values were 3.83 cm lower on the left side and 3.27 cm on the right side. While in the initial testing only 3 pupils met the 20 cm standard, in the final testing we observed 6. In the second alternative test, when the forward bend with the left bend knee was performed, the Fitnessgram standards in the initial testing were again achieved only by 5 probands. In the final testing the standard was achieved by 9 pupils. This finding documents the insufficient mobility of lumbar spine in the experimental group of the 5th grade boys.

In the trunk & lift test, trunk extensor strength and flexibility was tested. The results have shown that a group of the 5th grade probands achieved progressive development in the final testing. There was a 2.35 cm difference in values in the trunk & lift. The aforementioned inconsistency was confirmed as statistically significant at the significance level of 5 % ($t = -4.93, p < 0.05$). According to Fitnessgram standards, the lower 23 cm and the upper 30 cm limit is defined. Within the frame of initial testing, 6 boys met the standard and 9 of them did so in the final testing. Despite the significant shift in the flexibility and strength level of the flexor muscles, according to Fitnessgram the 5th grade pupils did not meet the standards even in the trunk & lift test.

Table 2. Comparison of the initial and final results in a back-saver-sit & reach test with right and left bend knee, a back-saver-sit & reach test and trunk & lift test in a group of 5th grade boys

5 th grade boys	Back-saver sit & reach(cm)				Back-saver sit & reach (cm)		Trunk & lift (cm)	
	In R	out R	In L	out L	In	out	In	out
M	13.73	16.73	15.38	16.17	14.83	16.90	19.38	21.73
Me	16.00	19.00	14.00	15.75	17.25	19.00	18.50	21.00
SD	5.54	5.87	5.96	5.83	6.27	6.20	3.63	3.24
Min	4.00	9.00	5.00	6.00	3.00	3.00	13.00	17.00
Max	24.00	28.00	29.00	28	26.00	25.00	26.00	27.00
t-test	*						*	

Legend: M – mean, Me – median, SD - standard deviation, Min – minimal, Max – maximal

When performing the back-saver sit & reach test with the right bend knee, an average 2.86 cm ($t = 2.05, p < 0.05$) progress in the 5th grade girls was found (Table 3). When checking the statistical significance of the averages, a significance level of 5 % was found at $t = -4.17, p < 0.05$. In the test with the left bend knee, it was found that the initial flexibility level was better (20.43 ± 6.46) than with the right bend knee (19.27 ± 6.94). The final values in a back-saver sit & reach test with the left bend knee showed as statistically significant $t = -2.3, p < 0.05$. In comparison with the average values of lower back and hamstring muscles mobility in a single leg seated forward bend with a bend knee, the experimental group of girls did not meet the 25 cm standard. In the trunk & lift test the experimental group of the 5th grade girls met the Fitnessgram standard and the shifts were shown to be statistically significant at the $t = 7.84, p < 0.05$ level after the experimental program was applied. From the gender point of view it can be stated that a better level of lower back and hamstring muscles flexibility was found in the 5th grade girls than boys, which is in accordance with the research of Čillík et al., 2015; Mandzáková, 2003; Moravec, 2002.

Table 3. Comparison of the initial and final results in a back-saver-sit & reach test with right and left leg bend knee, a back-saver-sit & reach test and trunk & lift test in a group of 5th grade girls

5 th grade girls	Back-saver sit & reach (cm)				Back-saver sit & reach(cm)		Trunk & lift (cm)	
	In R	out R	In L	out L	In	out	In	out
M	19.27	22.13	20.43	22.82	21.18	21.36	23.75	25.00
Me	20	21	20.50	22.00	21.50	19.50	23.00	24.00
SD	6.94	8.04	6.46	7.71	8.03	8.60	5.11	5.09
Min	5.50	11.00	7.50	12.50	2.50	8.00	13.30	15.00
Max	30.00	37.50	32.00	38.50	36.00	38.50	34.00	35.00
t-test	*		*				*	

Legend: M – mean, Me – median, SD – standard deviation, Min – minimal, Max – maximal

The level of the 6th grade pupils' mobility

In the trunk flexibility tests in the 6th grade boys, a significant progress was made in a back-saver sit & reach – right bend knee test ($t = 3.44$, $p < 0.05$) as well as a left bend knee ($t = 3.24$, $p < 0.05$). According to Fitnessgram, pupils did not meet the 20 cm standard in the final testing. In the back-saver sit & reach test, a statistically significant progress was not noted, but when compared to the Moravec research (2002), the pupils achieved a 4.45 cm better level of trunk flexibility. In the trunk & lift test the shifts were statistically significant ($z = -4.33$, $p < 0.05$) after the experimental program was applied. The 6th grade pupils met the Fitnessgram 23-30 cm standard in initial as well as final testing (Table 4).

Table 4. Comparison of the initial and final results in a back-saver-sit & reach test with right and left bend knee, a back-saver-sit & reach test and trunk & lift test in a group of 6th grade boys

6 th grade boys	Back-saver sit & reach (cm)				Back-saver sit & reach (cm)		Trunk & lift (cm)	
	In R	out R	In l	out L	In	out	In	out
M	18.43	21.72	18.41	21.5	19.45	20.72	26.10	28.24
Me	19	22	20	20.5	19.00	22.00	25.00	28.00
SD	5.58	5.68	6.00	6.15	6.66	5.34	4.30	3.77
Min	7	6	6	8	5.00	7.00	20.00	22.00
Max	29	31	28.5	30	28	28	38.00	36.00
t-test	*		*				*	

Legend: M – mean, Me – median, SD – standard deviation, Min – minimal, Max – maximal

Girls again showed better backbone mobility than boys. Shifts in joint mobility were shown in all tests except the back-saver sit & reach test as statistically significant at the 0.05 level. According to Fitnessgram the defined standard was met by the 6th grade girls in both backward tilt test and single leg seated forward bend (Table 5). In the back-saver sit & reach test the pupils achieved 6.5 cm better level of mobility when compared to Moravec research (2002).

The level of the 7th grade pupils' mobility

In the results of a back-saver sit & reach test with a right bend knee, positive shifts were observed in at the final testing in the group of 7th grade boys (Table 6). The difference between the initial and final values were shown as significant at a significance level of 5 % ($t = -3.06$, $p < 0.05$). In the second test (back-saver sit & reach with the left bend knee) some progress can be seen as well. However, the 1.33 cm improvement is not that significant. When compared to the Fitnessgram standard for 13 years old boys (20 cm standard), it can be stated that in the first test the required level of flexibility was achieved by 5 pupils and in the final testing by 9 boys. In an alternative version of the test with the left bend knee, it was found the standard was met by 6 boys and in the final testing by 7 boys. The low overall level of flexibility can be stated here as well, because less than half of the research group achieve the standard. In the back-saver sit & reach test,

the shifts were not confirmed as statistically significant, but when compared to Moravec research (2002), the 7th grade pupils achieved a 2.01 cm better level of lower back flexibility.

In the group of the 7th grade pupils, statistically significant progress ($t = -4.77, p < 0.05$) in the abdominal trunk & lift test was observed. Considering the Fitnessgram standard, 70 % of the group were included in a variance of minimum and maximum standard. We can therefore emphasize a higher level strength and flexibility of trunk extensor than in younger boys.

Table 5. Comparison of the initial and final results in a back-saver-sit & reach test with right and left bend knee, a back-saver-sit & reach test and trunk & lift test in a group of 6th grade girls

6 th grade girls	Back-saver sit & reach (cm)				Back-saver sit & reach (cm)		Trunk & lift (cm)	
	In R	out R	In L	out L	In	out	In	out
M	26.18	28.96	26.50	29.07	27.63	28.14	25.86	27.04
Me	26.00	31.00	27.50	30.00	27.00	27.25	24.50	26.00
SD	4.45	5.29	5.22	5.31	5.39	5.43	6.19	5.22
Min	14.00	14.00	15.00	11.00	15.00	14.00	18.00	20.00
Max	33.00	35.00	35.00	37.00	36.00	37.00	37.00	36.00
t-test	*		*				Z 2.04, 0,04*	

Legend: M – mean, Me – median, SD – standard deviation, Min – minimal, Max – maximal

Table 6. Comparison of the initial and final results in a back-saver-sit & reach test with right and left bend knee, a back-saver-sit & reach test and trunk & lift test in a group of 7th grade boys

7 th grade boys	Back-saver sit & reach (cm)				Back-saver sit & reach (cm)		Trunk & lift (cm)	
	In R	out R	In L	out L	In	out	In	out
M	17.08	18.42	18.11	19.92	18.42	18.98	25.85	28.00
Me	15.50	18.00	17.00	19.50	17.00	19.00	25.00	26.00
SD	6.89	6.99	6.48	6.04	7.08	7.13	7.03	7.35
Min	3.00	1.00	2.50	3.00	2.50	4.50	13.00	17.00
Max	35.50	36.00	35.00	33.00	37.00	39.00	43.00	45.00
t-test	*						*	

Legend: M – mean, Me – median, SD – standard deviation, Min – minimal, Max – maximal

It can be stated that in the comparison based on the gender, the 7th grade pupils show higher level of strength and flexibility trunk extensor in trunk & lift test when it comes to boys (Table 7). In a back-saver sit & reach bend as well as two bend knees tests it was shown that girls had better mobility. Besides the back-saver sit & reach – legs bend test statistically significant progress was made in all other tests after the experimental program was applied. In comparison with Moravec research (2002) girls achieved a 0.7 cm lower level of joint mobility. The average final values of the girl group do not meet the standard for lower back and hamstring muscles flexibility represented by a back-saver sit & reach with bend knee. In a trunk & lift test the 7th grade girls achieved the defined 23-30 cm standard.

Table 7. Comparison of the initial and final results in a back-saver-sit & reach test with right and left bend knee, a back-saver-sit & reach test and trunk & lift test in a group of 7th grade girls

7 th grade girls	Back-saver sit & reach (cm)				Back-saver sit & reach (cm)		Trunk & lift (cm)	
	In R	out R	In L	out L	In	out	In	out
M	19.78	22.57	19.55	23.03	21.78	22.02	23.83	25.38
Me	18.00	23.00	18.00	21.50	21.00	23.50	24.00	24.00
SD	7.78	7.21	8.23	7.83	6.57	6.97	4.65	4.91

Min	7.00	10.00	6.00	7.00	9.50	11.00	17.00	20.00
Max	35.00	38.00	34.00	37.00	31.50	33.00	35.00	37.00
t – test	*		*				*	

Legend: *M* – mean, *Me* – median, *SD* – standard deviation, *Min* – minimal, *Max* – maximal.

4. Discussion

Flexibility tests and spine flexor strength tests bring us significant observations based on the comparison of stability and correct postures. There are many opportunities for active as well as passive activities for children and youth, which can cause some developmental errors, especially at an early age. We will therefore try to confront the research as well as the standards which deal with the given problem. In our research we reported an insufficient level of lower back and hamstring muscles flexibility and trunk extensor strength and flexibility in a group of 5th grade boys. According to the Fitnessgram standard (Cooper Institute, 1999) 60.83 % of the probands did not meet the required level at the end of the experimental period. In the experimental group of girls, 55.5 % of the probands did not meet the standard in the backbone flexibility test. Based on the results, it must be stated that, despite our effort to increase the flexibility level in these groups, we were not successful in achieving this goal. The results also confirmed an insufficient level of spine flexors, especially in the group of boys. Despite the fact that the results in the final testing showed positive shifts in the group, 60.83 % of the probands did not achieve the standard, which should be between 22.86 and 30.48 cm in the back-saver-sit & reach test forward bend. On the other hand, there was a positive shift in the group of girls, which according to the standard was confirmed in 92.6 % of the entire experimental group of girls. In the back-saver-sit & reach test, which is recommended by Eurofit (2002), it was found that the level of our experimental group of girls is lower compared to the Bence research (2005). This knowledge was also confirmed by 2002 Slovak population standards not only in girls but also in boys. There is even a 5 cm lower level of trunk flexibility in boys.

On the contrary, positive shifts were found when we compared the results of the group of the 6th grade boys. The results confirmed good backbone flexibility and flexor strength in girls and it can also be reported that girls achieved better results than boys. It can be therefore stated that the Fitnessgram standard (Cooper Institute, 1999) was met. More than half of the group of boys as well as girls achieved success. In the back-saver-sit & reach test, a higher level of flexibility was shown in our experimental group of boys as well as girls as reported by the 2002 general public average. When compared to the Bence research (2005), girls achieved on average 7 cm higher level and 6.4 cm in comparison to the 2002 Slovak average. A significant progress was also noted in boys, who in comparison to the Slovak average achieved an average performance of 3.17 cm.

The group of 7th grade boys achieved low performance level, especially in the backbone flexibility test. According to Fitnessgram (Cooper Institute, 1999), in the group of boys the standard was not met by 70 % and in the group of girls by 85 %. However, the backbone flexor strength tests confirmed a high performance level, because majority of the pupils met the standards in both groups. The results of the back-saver-sit & reach test showed a higher performance level in the group of boys as noted by the Eurofit standard (Moravec et al., 2002). The average performance of the group was 0.52 cm lower in girls as stated by standard of the 2002 Slovak average. Significantly different results are shown by Bence (2005), where the average performance of the tested girls in the seated forward bend test was 4.05 cm higher. Based on these results, it can be stated that the probands in the 5th and 7th grade did not meet the national level standard. The only exception are the 6th grade pupils. On the contrary, based on these results it is clear that the backbone flexor strength level is optimal with the exception of the 5th grade pupils in the kinetic ability test.

5. Conclusion

Our general research goal was to try to identify the problematic areas of the state ISCED 2 education programme implemented in schools of secondary education, which is reflected in the current physical and motoric level as well as in the functional ability of today's pupils. By meeting the objectives we experimentally verified the intervention kinetic programme with the implementation of the Physical Education and Sport lessons, which should, to a certain extent, stimulate kinetic development and adequately support development of the kinetic abilities.

The main goal of the research was achieved by acquiring results, which underlined the achievement of possible positive shifts in problematic areas of the pupils' current kinetic level.

The results gave us the following observation. Flexibility and backbone flexor strength demonstrated the significant impact of the kinetic programme on the 5th, 6th and 7th grade pupils. Despite that the only group which did not meet the minimal recommended Fitnessgram standard was the group of 5th grade pupils, where we found a low general level of performance. In the group of 5th grade girls we reported a positive impact of the exercises on the backbone extensor muscle strength level but the standard was not met in the back-saver-sit & reach test. In the group of 6th grade girls, progress was seen and the standards were met in both tests. In the group of the 7th grade girls, the average final values did not meet the standard in a back-saver-sit & reach test with right and left bend knee and so did not show the required lower back flexibility. In the trunk & lift the 7th grade female pupils met the required standard ranging from 23 cm to 30 cm.

In the trunk & lift test, strength and flexibility of the trunk extensors were observed. The results showed that the 5th grade probands achieved progressive shifts in the final testing, where the difference was confirmed as statistically significant at the significance level of 5 % ($t = -4.93$, $p < 0.05$). Despite the significant shift of the flexibility and backbone flexor strength level, the 5th grade pupils did not meet the Fitnessgram standard in the trunk & lift test. The experimental group of girls did not meet the Fitnessgram standard in the mobility test, but in the trunk & lift test the standard was met and the shifts were reported as statistically significant ($t = 7.84$, $p < 0.05$) after the implementation of the experimental programme.

Based on the acquired results of our research the following observations and recommendations can we concluded: the implemented system of kinetic exercises showed positive effect on the change in backbone flexibility and strength and flexibility of the trunk extensors level in all grades. During the Physical education lessons, we recommend putting more emphasis on the health when exercising, in other words to observe and emphasise correct body posture. In pupils with a low kinetic ability level, we suggest increasing the attention of the teachers and the interest of the parents with the intention of observing and improving their children's further development.

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