Physical Education and Sport in Secondary and Higher Education

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Physical Education and Sport
in Secondary and Higher Education

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Introduction

The aim of the special issue is to provide a kind of situational picture of the physical education and sport of some Central-European countries (Hungary and Slovakia), besides highlighting the role of the physical activity in health protection. The main concept of the issues’ articles is related to physical education at the primary and secondary educational level and related to sport at the tertiary level. At macro-level, the reader can learn about the positive effects of physical activity and sport on the physical, spiritual and mental status. At the meso-level, we can gain insight into a country’s, e.g. in case of Slovakia, PE curriculum and into its changes, but the results of a national impact assessment of a special handball program are also introduced regarding this level. At micro-level, the reception of the everyday physical education from the educators and students aspect and its effects on the individual skills are presented beside the sporting habits of the higher educational students in an international comparison. Six studies can be read in this issue by a Slovakian, an Italian and four Hungarian authors.

The special issue has two editors. One is Klara Kovacs, senior lecturer of the University of Debrecen and researcher of CHERD who made empirical analyses regarding the sporting habits of the Hungarian and cross-border minority Hungarian students with her co-authors. They compared the sporting habits of the students of the different institutions and interpreted the differences by applying qualitative methods (observation and interviews) concerning the institutional environment. The other editor is Ferdinando Cereda, professor/lecturer at Bachelor of Sport and Exercise Science Department of Education, University Cattolica del Sacro Cuore in Milan (Italy). In his study, he introduces the positive effects of physical activity on physical and mental health.

The study of Elena Bendikova provides a comprehensive picture of the health status of the Slovakian population and the status of the physical education and physical activity of the students from nursery to adulthood. The paper also notes the changes in the aims and content of the curriculum of the physical education since the regime change to achieve

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better implementation regarding the socialisation of sport and regular physical activity and to support the growth of a more (health-)conscientious generation.

Two papers with Hungarian authors introduce results regarding the everyday physical education. Agoston Nagy and his co-authors compare the PE and non-PE educators’ and students’ opinions and experiences regarding the everyday physical education in the North Grate Plain region, while Zsolt Szakaly and his co-author examine the effect of the everyday physical education on the somatic and motoric development. Furthermore, Anetta Muller et al. made an impact assessment of the ‘Handball at school’ program related to everyday physical education to investigate whether the program develops the accuracy and performance stability results of students as well as their precision of technical implementation.

We propose the thematic issue for everyone who would like to recognise generally the positive effects of physical activity and would like to gain insight into the physical education curricula in Central-Europe (Hungary and Slovakia) and their changes, furthermore, into the special programs and the results of their impact assessments. Concerning higher education, a comparison is introduced regarding the sporting habits of the students of the Eastern-Central-European higher educational institutions and their institutional environment.
Role of the Handball at School Programme in Everyday Physical Education

Anetta Muller\textsuperscript{2}, Istvan Juhasz\textsuperscript{3}, Eszter Boda\textsuperscript{4}, Zsuzsa Nagy\textsuperscript{5} & Melinda Biro\textsuperscript{6}

Abstract

In Hungary considerable education-policy changes have been implemented concerning school PE since everyday PE lessons were introduced the necessity and topicality of which is unquestionable. In this process Handball in School program was also introduced the ability developing role of which was examined by us. A survey programme was organised by us in the autumn and spring semesters of 2015/2016 academic year aiming to prove that project Handball at School proved to be positive on aiming accuracy and performance stability results of students, as well as their precision of technical implementetation. 183 students were examined (2-4 grades) who had two sponge-handball lessons a week out of their 5 PE lessons. To examine aiming accuracy two tests were applied. One of them implied throwing at a target from throwing straddle without previous swing performed by the students by age-specific sponge-handball from distances corresponding their age. The other test for checking aiming accuracy was throwing at a target from throwing straddle with previous swing. At this test also surety, performance time and precision of technical implementatation of upper shot were noted. It can be stated that aiming accuracy, its technical implementetion and time needed for the implementetion developed at both boys and girls compared to the autumn measurement when checked at spring (the difference was significant). The programme made bigger impetus on the results of the girls.

Keywords: handball, PE, primary school children

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**Introduction**

In Hungary important educational changes in school PE were implemented when introducing every-day PE, the necessity and topicality of which is unquestionable. The increase in the number of physical PE has been verified by the worrying health tendencies experienced among children and young people.

Physical activity is one of the most significant factors with preventive power to retain health therefore it is worrying that those people’ proportion is very high that never do any sports or do not do exercises sufficiently (Moravec & Major, 2017).

Since health damaging effects of sedentary lifestyle make their impact already in young, school age, it is important to take various preventive steps. Having everyday PE been introduced it is a great tool for it, as motion is a possible means of preserving physical and mental wellbeing (Biro, 2015). Introduction of everyday PE was on purpose, as data reporting about the health state of the population made it inambiguous that it is indispenible to stop physical deterioration of the nation.

In the past years several studies have dealt with positive impact of PE, motion on health and it has been proven that motion has manysided positive effects on human body. They have justified its positive effects on prevention and rehabilitation of the most widespread diseases (coronary- and heart diseases, certain types of cancer, second type of diabetes, etc.) (Piko & Keresztes, 2007; Somhegyi & Nanszakne, 2006; Kiss, 2003; Bagdy, 2007), and also diseases connected to brain functions (stroke, Alzheimer and Parkinson syndrome) (Radak et al, 2007; Szabo, 2010; Radak et al, 2011), as well as it contributes to the mental and subjective welfare (Băltătescu & Kovacs 2012, 2013; Kovacs, 2012; 2014; 2015; Kovacs & Perenyi, 2014; Dinyane & Pusztai 2016; Pusztai 2016; Pusztai & al, 2016; Pfau 2015). Recently more and more children have been affected by obesity and its prevalence in preventing and solving of which decreasing body-weight exercise plays important role (Lopez & Hynes, 2006; Janssen et al, 2005).

Activity at the PE lesson plays outstanding role also in developing abilities, concentration, memory and mental performance of the students (Tomporowski et al, 2008; Trudeau & Shephard, 2008). Several studies deal with many-sided effects of PE, its positive results on cognitive function. Cognitive abilities, concentration, memory, verbal skills, attitudes, performance in education and also understanding, attention and discipline in classroom get better as well (CDC 2010).

The objective of school PE and sport is versatile presonality development, enhancement of healthy physical and mental development the tool of which is the motion material of sport, this way of handball as well. The movement material, the wide repertoire of handball sport develops motorous skills, coordination, concentration, it is varied, has positive effects on cognitive, emotional, motorous abilities and learning mechanisms in direct and indirects ways. The joint activity done in a team helps shaping relationships, social
behaviour, improves interpersonal connections, enhances socialisation. Harmonisation of defence and attack demands paying attention to each other, cooperation from the students, this way social relationships, tolerance, attention and concentration develop properly. During matches processing success and failure can also be realized, self-control, persistence, will-power, competitiveness, tolerance of pain also develop and real self-assessment can be shaped. These features are all indispensable for fitting into the society, for creating optimal conditions for personal life and welfare.

Recently education has changed a lot, this way contentual and methodological aspects of public education have also got altered. It is proven by the continual modification of the curricula (1995–NAT1, 2003-NAT2, 2007-NAT3, 2012-NAT4). The latest National Basic Curriculum (NAT) was passed by the government on 4. June 2012 based on Government order 110/2012. (VI. 4.), where different aspects of educational objectives were expressed, like physical and mental health education. Organising and ensuring every-day PE, that is having 5 PE lessons a week in full-time education is imposed mandatory by Act 27.§. Beginning from 2012/2013 academic year every-day PE is compulsory in 1., 5. and 9. classes, then it will be in all classes in phasing-out system.

Beginning from 2015/2016 academic year every-day PE has become general. To fulfil the principles and objectives skills must be acquired in game and sports culture and it is essential to create needs for healthy and health-centered activities. Objectives of school PE are as follows: knowledge of the sport, developing, enlarging movement skills, participation in freetime and sports events, creating values based on regular PE and healthy lifestyle. Lot of research focussed on the every-day P.E (Fintor, 2016; Fintor, 2017; Borbely & Fonai, 2016).

Handball at School project got involved in this favourable education-political environment, enriching the educational content with the specific movement material of the target group, ball-skills developing exercises of handball on a weekly basis out of the five PE lessons.

The framework curricula made to the project was published in Magyar Kozlony 2016. year 126. issue 5. attachment 22/2016.(VIII.25) EMMI order, supporting the organisational work of teachers.

**Description of Handball at School Programmes**

Hungarian Handball Association launched its Handball at School project in September 2013 in 50 schools, with 54 PE teachers, 1430 students. Thanks to the favourable experience the programme was enlarged in September 2014 to 91 schools and 98 PE teachers, this way growing the number of the children to 3400. At present – due to further enlargement in 2015 – the programme is going on in 117 schools, with 127 PE teachers, with participation of almost 4565 students (1-8. grades) in 243 groups. Out of all the participants 1435 students are in 2-4. classes. The programme and the schools
participating in it have become a dominant scene of talent care besides enlarging youth supply base of handball.

In 2016/2017 academic year further expansion could be experienced due to popularity since now, in the programme 4924 students have been registered from 120 schools who are educated by 128 PE teachers. Teachers participating in the program must have ICT competency as an electronic interface should be used for documentation. ICT competence is an element of competitiveness in the labor market (Czeglédi, 2007; Czeglédi, 2016; Rathonyi-Odor et al 2015; Dajnoki et al, 2015; Pfau, 2015). Both the programme and the participated schools are one of the stages of determining talent promotion besides enlarging the basis of handballers’ recruitment. Therefore, on the map of Hungary the number of schools taken part in this programme got increased.

Figure 1. From September 2017 the regional distribution of the schools participated Handball at School programme in Hungary

The map (Figure 1.) illustrates well that not only Budapest but Western and Eastern Hungary get also involved in the programme. A big amount of small municipalities even the disadvantaged areas were also involved in the programme, which can improve the disadvantaged students’ chances to be able to engage in the quality education.

Since 2017 a so called School Festival has been launched the objectives of which were to compete the internal network of Handball at School programme, take care of sports relations among the participating schools, ensure the experienced-oriented competition or enlarge the school background of handball.

The PE teachers’ professional support taken part in the programme is continuous on behalf of Hungarian Handball Association since it helps the participants with specialised materials, accredited trainings made for teachers, continuous assistance and surveillance of the system as well as research.
This programme facilitates the implement of every-day PE in the school life as well as it contributes to ensure the basis of the Hungarian handballers' recruitment. By implementing the corporation tax allowance system, so called TAO (Bacs & Bacsne, 2014) (support of team sports involving handball, too) the number of handball players and children in recruitment was increased significantly (illustrated in the figure 2.).

As outlined handball gets more and more popular among children, more and more children choose this sport and become registered players in which Handball at School programme has also a great role since providing of its popularity, massification and conditionality contributed to increase the number.

The junior section pupils of the schools (2-4. classes) participating in the programme learn basic technical tactical elements, system of rules of handball, sport twice a week within every-day PE and do various ball exercises (to develop skills and dexterity) with light tool (sponge handball) and playful competitions within the lesson. The PE teachers taking part in the education of the programme are trained by the Hungarian Handball Federation and the schools are supplied with the necessary sports equipment. The results are controlled by the mentor system and by surveying the lesson plans sent by the teachers. This programme provides professional supervision, continuous training and check-up this way it is exceptional in our country. Although a package and retraining of professionals was ensured in the Hungarian programme of kid-athletics, however, the feedback, the continuous control was not fulfilled as thoroughly as in the school programme of handball, therefore it can be considered unique.

**Literature Review**

The literature around handball has tended to focus on aspects of physical performance in adults. Resistance training, relative fitness, general and specific physical and physiological characteristics have been investigated with regards to handball players' performances (Marques & Gonzalez-Badillo, 2006; Granados et al, 2007; Nikolaidis & Ingebrigtsen,
In further studies of fitness and physical characteristics of handball players, Schweisig et al’s work (2016a; 2016b) focused on validating handball specific tests but excluded any consideration of skills related with testing. In addition to adult research, studies have also been undertaken in relation to the measurement of school-age children. However, in common with adult based investigations, research with children has tended to be related to fitness and physical characteristics (Ingebrigtsen & Jeffreys, 2012; Karadenizli, 2016; Kayapinar et al., 2015; Ingebrigtsen, Rodahl & Jeffreys, 2013). Work by Ion (2015) has identified beneficial influences of handball participation on motoric skills development of children.

**Questions**

Before starting our research the following questions were asked since we tried to find the answer for our research:

- Which tests and procedures examine the major conditional and coordinating skills which are suitable to help selection process of junior section pupils in handball sport?
- How will Handball at School project change the sport-specific coordination abilities of the students of different age, gender or pre-training?
- How will target accuracy change in the implementation of the movement of the students of different age, gender or pre-training?
- How will target accuracy of students taking part in the survey change due to the project during the year? Which parameters mostly changed by the autumn and spring?

**Hypothesis**

- We consider that tests to check and examine conditional and coordinational skills, sports-specific tests must be approached in holistic way when finding talents for a sport in junior school age.
- We presume that Handball at School project will have different effect on the sport-specific coordination abilities of the students of different age, gender and pre-training.
- We presume that considering genders there will be bigger development for girls in handball sport specific coordination tests.

**Sample**

Our survey was organised in three schools in autumn and spring, 2015. Primary school students of 2. and 4. classes had 5 PE lessons a week out of which 2 lessons were spent on acquiring the knowledge of handball sport. They were surveyed in Budapest, Tomori Pal Elementary School, Ajka, Fekete-Vorosmarty Elementary School and Gyongyos, Kalvariaparti Elementary School. These schools joined the programme on 1 of September.
2013, the teachers were well-trained professionals, PE teachers had big experience in teaching handball as well. The pupils were chosen in 2015-16 academic year at least 10% of all the children of the junior section took part in the programme. Out of 1430 pupils of the junior section, 183 took part in the survey, that is 12.8% of it. The locations were chosen so that from Western and Eastern Hungary and a school from the capital city were in the sample, so all the regions of Hungary were represented.

Figure 3. Percentage of the samples by location, gender, age and sporting habits

Material and Methods

To test the survey material pilot measurements were done in Ozd, Vasvari Street Primary School, to make sure the test material offered for the survey matched the abilities of the age group and to get information about the feasibility of the exercises and general and special technical level – related to the tasks - of the students of different age and pre-training. This school was chosen to have the location where underprivileged children could also be tested and the venue was suitable to play sponge-handball.

During the pilot research alterations were made in the previously suggested material, since the 1. and 2. class pupils could not perform the 2. task (Alternate hand dribble with ball) even at basic level in alternative way. Therefore the above mentioned age group had to perform this task only with one hand (on the dominant side) during the survey. (Evaluation of this task will be published in a future article.)

Besides this – as the pilot test was done at the beginning of the school year -, the 1. class pupils could not be surveyed, since even understanding the task caused serious problems
for them as lacking pre-training, they had never faced such kind of movement nor material.

It can be seen in the chart that there were about the same proportion of children from all the three locations. 94 students (51.4 %) of the measured junior section children were boys, while 89 students (48.6 %) were girls. The surveyed ones came from 2., 3. and 4. classes, with about the same proportion: 63 students (34.4 %) 2. class, 57 students (31.1 %) 3. class, and 63 students (34.4 %) 4. class (Figure 3.)

44 students (24 %) of the surveyed children do not do any sport other than PE lesson, also 44 students (24 %) were the ones who chose handball sport for their afternoon trainings, while 95 of all the students (51.9 %) also practiced it at training in the afternoon, however they did not focus on handball (figure 3.). 66 % of the students took part in one-two trainings a week, while 33.9 % attended more than two trainings a week. 44 of the students (24 %) children surveyed in the programme and did not do sport either at school or at a club, 88 students (88 %) did sport at association, while 53 students (29 %) had sports activities at school.

The children surveyed in the sample were grouped by decimal age categories. In the autumn survey, the dominance of 10 year old children was noticed, making 34.4 % of the surveyed ones, the group of the 9 year old students was just 30.6 % of the sample, 8 year old students were 25.7 % of the sample, 11 year old children were 4.4 %, while 6 and 7 year old children took only 5.0 % of the sample.

**The Features and Positions Surveyed**

Movement accuracy is a very complex category in handball, therefore we tried to examine it through different factors, in order to be able to give a complex summary on them later.

*Figure 4. Structure of tests surveyed*

In our present article the results of our two surveys to test aiming accuracy are described. Therefore, the description of these tests and their evaluation is also shown in details.

Shooting in transversal straddle position without running up (to survey sports specific coordination skills)
The pupils stood behind the line on the floor, 5 sponge-handballs adequate to their age were placed in a turned-up small box on the side of their throwing hand (see test 2.) A small box (dimension: 26 cm tall, 62 cm long, 42 cm wide) was placed 5.5 meters away in case of 1-2. class students and 6 meters away in case of 3-4. class students in the way that the surface covered in leather faced the pupil performing the shot. The student heard the whistle, targeted the surface of the small box with the balls having taken from the small box near him so that the ball hit it with a direct touch. It was performed with upper throw (position of elbow: level of the shoulder or over of the sholder).

The number of attempts were 5, at the survey the number of scores, the time of implementation (with digital watch, sec. – centi-seconds accuracy) were taken and accuracy index was counted (average/deviation).

Shooting in transversal straddle position with running up (to survey sports specific coordination skills)

The pupils stood behind the line on the floor, (The distance of the line and the target surface was the same as in test 5). 5 sponge-handballs adequate to their age were placed in a turned-up small box on the side of their throwing hand (see test 2.) The student heared the whistle, had to run back to the small box, take a ball out of it and had to run to the line and similarly to task 5, had to target the small box. He had to repeat it as long as he used all the 5 balls. It was performed with upper throw (position of elbow: level of the shoulder or over of the sholder).

The number of attempts were 5, at measuring the number of scores, the time of implementation (with digital watch, sec. – centi-seconds accuracy) were taken and accuracy index was counted (average/deviation).

The Way of Calculation

The results of the trials applied in the survey were expressed in quantitative way. The data were processed with SPSS.22.0 statistical programme. The results were processed and evaluated following mathematical basic statistics survey procedures.

Based on the instructions of handbook Introduction to the Methodology of Scientific Research the population was grouped then averaged and deviated, used median and modus were counted with basic statistic methods. The correlation survey was done with a two-sample t-probe to show the difference between the groups or difference between the autumn and spring values.

Results

Implementation of shooting in transversal straddle position without running up, from stabil position is a task which can be expected from and can be performed by school children of junior age, since it is practised not only when being taught with sponge-
handball, but small ball throw and throw as part of the natural exercises of athletics in the curriculum, it appears in school PE games (dodgeball) or even in competitive and relay races. The size of sponge-handball used at the survey was the one used by the age groups, since the size of the palm is also different at the different age groups. This way grip stability implemented with suitable sponge-handball was adequate to the certain age groups.

However, it is well-known that there is a significant difference between the throwing technics, coordination abilities, muscular power of arms and so on, of the first and fourth class pupil. Therefore the tasks had to be differentiated, so different shooting distances were chosen, that the distance between the target and the shooting place was different, accordingly to the different age groups which had been resultful in our previous surveys (pilot research). Since the different age groups threw from the same distance, the younger ones found it too difficult, while the older ones performed it almost without mistakes. The task accordingly the age was determined in the way that the distance of the vertical surface of the small box for 2. class pupils was 5.5 meters, while for 3-4. class pupils was 6 meters. Differentiation of the shooting distance was necessary because not only throwing technics got better with age, but throwing performance while aiming accuracy resulted in improving tendency, presumably thanks to taking part in the handball programme and also the above mentioned distances were set just like goal line for the different age groups. The students had two attempts. At each attempt they performed five shots so after some rest they had another five shots as second attempt.

Table 1. The results of Shooting in transversal straddle position without running up related to aiming accuracy, target accuracy, time results and technical implementation * significant p<0,05  ** very significant p<0,01 Lifted elbow (position of elbow: level of the shoulder or over of the shoulder)

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| **First attempt  
Score (pieces)** | 1.61         | 1.338        | 2.21     | 1.367      |
| **Second attempt 
Score (pieces)** | 1.71*        | 1.132*       | 2.26*    | 1.209*     |
| **First attempt 
Lifted elbow 
(pieces)**     | 3.26**       | 1.951**      | 3.74**   | 1.747**    |
| **Second attempt 
Lifted elbow 
(pieces)**     | 3.04**       | 2.099**      | 3.76**   | 1.651**    |
| **First attempt  
Time (sec)**   | 11.55**      | 1.995**      | 10.59**  | 2.021**    |
| **Second attempt 
Time (sec)** | 11.04**      | 2.039**      | 10.06**  | 1.723**    |

In case of boys the average score from the first 5 throws was 1.61 (deviation=1.338) in the autumn survey. After the first five shots they had some rest and then threw five times again as the average value was 1.71 (deviation=1.132). The results of the second attempt, second aiming steadily showed better values. Muller (2004) had 10 relay kicks done by primary and secondary school students to test aiming accuracy. It is proven that the fourth kick attempt was the best, because of the above mentioned ones. The tenth attempt
resulted in the weakest result, as tiredness caused unfavourable tendencies in soft coordination.

In our research more precise aiming was shown by the fact that the deviation value measured at the second time proved to be smaller, the variation range of the output decreased showing more balanced aiming performance.

At the spring survey even efficiency of sponge-handball practices was seen. During the spring survey the boys performed this shooting task at 2.21 (deviation=1.367) value on average at the first attempt indicated better shooting accuracy after the first semester than in autumn. However, this improvement was merely tendentious since the shooting results of the two measurements did not show significant differences. Neither did the deviation values. During the second row of throwing attempts boys resulted in better values again, since the average of scores improved from 1.71 to 2.26 on average and deviation increased from 1.132 to 1.209 from autumn to spring. The cause of it may be that progression to output could increase variation range of scoring performance. When checking the second series, significant improvement was experienced at boys (p<0,005) since spring results got better than the autumn ones.

When checking the scoring accuracy of girls we found that during the autumn survey the score of the first aiming attempt was 1.09 (deviation=1.007) out of 5 throws on average, this value fell behind the more precise aiming results. The average of the second series was 1.13 (deviation=1.179), being more favourable than in the first series.

In the spring survey the scoring results at the girls were influenced by the efficiency of the sponge-handball activities, as well. During the spring survey the girls performed this aiming task at 1.67 (deviation=1.204) value on average since the first attempt showed better aiming accuracy after the first semester than in autumn. This improvement was not only tendentious, since significant differences were experienced between the two values (p<0,005), the performance of the girls concerning aiming accuracy got more improved by Handball at School programme. During the second row of throwing attempts girls again had better values, since the average of scores improved from 1.13 to 1.64 on average and deviation increased from 1.179 to 1.245 from autumn to spring. When checking the second series, significant improvement was experienced at girls (p<0,001) since spring results got provenly better than the autumn ones.

Besides scoring accuracy technical implementation, movement accuracy was also checked, the surveyor also watched at the certain throws how many times the attempt was performed with lifted elbow. The boys performed the throw with lifted elbow 3.26 times, with 1.951 deviation value, out of 5 attempts at the first autumn series. At the spring measurement the task was performed with proper technique 3.74 times on average, and with lower deviation value (1.742). More precise technical performance also improved. Compared to autumn results the improvement in technical implementation was proven by not only the smaller deviation but also significant differences were
experienced after doing the two sample-T probe. "Handball at School" programme had good effects also on improving technics. In the second series of the autumn survey boys performed the exercise with lifted elbow 3.04 times, with 2.099 deviation value. The spring results improved to 3.76 on average (deviation=1.651) which may be considered significant difference.

The girls performed the throw with lifted elbow 3.33 times, with 1.899 deviation value, out of 5 attempts at the first autumn series. At the spring measurement the task was performed with right technics 3.87 times on average, and with lower deviation value (1.447). The more precise technical performance also improved efficiency and target accuracy. Compared to autumn results the improvement in technical implementation was proven by not only the smaller deviation but also significant differences were experienced after doing the two sample-T probe. "Handball at School" programme had good effects also on improving the technics of the girls. In the second series of the autumn survey boys performed the exercise with lifted elbow 3.54 times, with 1.745 deviation value. This is a more favourable result than the values experienced at the first series. The spring results were improved at girls to 3.92 on average (deviation=1.432) which may be considered significant improvement.

It is interesting that girls generally performed more accurately, they had more punctual attempts, with smaller variation range as for technical implementation, the reason of which may be that boys are more confident in their shooting abilities, shooting power and girls offset it with more focus on technique.

Time spent on implementation was also measured, since motion pressed by time is also peculiarity of ball games, determining in open-skill sports. However, understanding sports-specific connection between fastness and accuracy is also important.

The boys performed the first series in 11.55 sec in autumn, which value decreased to 10.59 sec by spring. The average value of the second series in autumn was 11.04 which got improved to 10.06 sec by spring. The girls did the first series in 11.58 on average in autumn which was improved to 10.97 by spring. The second series resulted in 11.23 sec in autumn and in 10.52 sec in spring. The results of the boys were always better, they got faster in performing the exercise, and improvement was seen at both genders in time by spring.

Literature calls the attention to the connection of fastness and accuracy. Ambivalency of fastness-accuracy in kinetic skills was first mentioned in Fitts’ Law. Schmidt (1996) examined correlation of fastness and accuracy on the example of baseball hit. In his research he stated that the increase of the speed of the swing or of the weight of the racket increased time and space accuracy.

The Hungarian training-theory expert dealing with this topic, Nadori (1989) wished to determine characteristics of fast and accurate motion. According to him efficiency of most
sports is determined by fast and precise implementation of movement that is ‘action’. However, these two features – speed and accuracy – appear reversely in sports activities. It is generally true, that the faster one tries to perform the various kinetic actions, the less accurate technical implementation becomes, similarly the more accurate, precise movement one tries to perform, the slower the implementation becomes. Therefore Nadori (1989) thinks that an optimal ‘zone’ can be assumed in speed and accuracy where the sportsman is fast enough in his action not to decrease accuracy.

The next task was similar to the previous one, but the students had to implement the shooting task performed with running up characteristic in handball through a series of throws, with similarly different ball and shooting distance corresponding their age as mentioned in the previous trial.

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Autumn results</td>
<td>Spring results</td>
</tr>
<tr>
<td></td>
<td>average</td>
<td>deviation</td>
</tr>
<tr>
<td>First attempt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score (pieces)</td>
<td>1.50**</td>
<td>1.124**</td>
</tr>
<tr>
<td>Second attempt</td>
<td>1.62’</td>
<td>1.219’</td>
</tr>
<tr>
<td>Lifted elbow</td>
<td>3.04**</td>
<td>2.099**</td>
</tr>
<tr>
<td>Second attempt</td>
<td>3.26**</td>
<td>1.994**</td>
</tr>
<tr>
<td>Time (sec)</td>
<td>18.00’</td>
<td>2.597’</td>
</tr>
<tr>
<td>Second attempt</td>
<td>17.659’</td>
<td>2.494’</td>
</tr>
</tbody>
</table>

Similar results and tendencies can be seen to the previous trials when examining the results, shooting accuracy, technical implementation and time results of the boys and girls. It can be stated that in both the case of boys and girls shooting accuracy of the second series of throws are more favourable, and with smaller variation range. It is true for both boys and girls that target accuracy by scores in the autumn measurement got worse and the spring results got significantly better for both sexes. When checking technical implementation, girls performed the throws with right technique more often since lifted elbow was more frequent for them. Significantly better results were proven for both sexes in both score results, technical implementation and implementation time.

**Conclusion**

In our pilot research and survey we experienced that in junior school age tests measuring and checking conditional a coordinational abilities, sports specific tests of handball must be applied in holistic approach when wording talent and choosing a sport.
In our former article, these two pilot tests were studied among children where we compared the athletes’ group done sports for 0., 1., 2. and 3. classes from autumn to spring. Handball at School programme demonstrated some development in the tested group after half year since the autumn and spring values of the two sample-T probes showed significant differences along certain variables (target accuracy, speed of implementation, technical implementation) (Juhasz at al., 2016).

In another article of us the fact was proven that by applying the same probes handball players achieved the best results and these students’ targeted accuracy and constancy of performance who do not pursue any sports only at PE lessons were lower (Juhasz et al., 2017.).

Our research showed that in case of certain parametres (technical implementation, accuracy, shooting accuracy) Handball at School programme made different effect on students of different sexes, in case of girls the improvement is more dominant. Several trials showed that more development is experienced at girls at handball sports specific coordination tests.

Handball at School programme – meaning two sports specific lessons a week - improved shooting accuracy results, technical implementation and speed coordination of all students alike.

**References**


Magyar Kozlony (2016), year 126. issue 5. attachment 22/2016.(VIII.25) EMMI order


Thematic Article

Effects of Daily Physical Education Participation on the Somatic and Motoric Development of Young Students

Zsolt Szakaly 7, Jozsef Bognar 8, Balazs Lengvari 9 & Akos Koller 10

Abstract

Regular physical activity is one of the dominant elements among environmental factors, which promotes young individuals’ healthy somatic and motoric development. In the present investigation it was hypothesized that participation in daily physical education (DPE) has a positive effect on the age-dependent anthropometric and fitness characteristics of primary school boys. The investigation took place in six primary schools in a mid-sized city in Hungary before and four years after the implementation of DPE. Group 1 had three PE lessons a week (n=562) and Group 2 had five PE lessons a week (n=551). According to our results, there were no differences in the BMI between the two groups; however, Group 1 had a significantly higher waist-hip ratio in all age-groups except for the 10-11 age cohort. In the 7-8 age cohort, Group 2 demonstrated significantly better results in the shuttle run test; conversely, in the older age groups Group 1 did significantly better. Altogether, daily PE had an age-dependent effect on the somatic development. Daily PE had a positive protective effect on BMI, the waist-hip ratio of the 10-11 age cohort, and also the fitness level of the 7-8 age cohort. It can be proposed that, through careful planning in DPE, exercise intensity and teaching methodology should be increased in an age-specific manner.

Keywords: daily physical education, school-aged boys, age-dependent characteristics, waist-hip ratio, BMI, 20 m shuttle run

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Introduction

Besides genetic and epigenetic factors, a health-conscious lifestyle has a major impact on optimal somatic and mental development (Beunen, 2003; Post, Kemper, Twisk, 1997). With supportive social and environmental factors, school physical education might play an important role in maintaining a healthy lifestyle, as it provides a science-based, systematic and conscious physical activity program for all students (Meszaros, Szabo, Mohacsi et al., 2002).

Due to recent developments in the areas of science, economics, education and sport, the anthropometric parameters of students have generally improved in the past few decades (Bodzsar, 1998). In contrast to such improvements, the physical and motor performance of youth in Hungary show a decreasing trend (Toth, Eiben, 2004) – many aspects of this problem have already been discussed in the literature (Bedros, 2017; Rowland, 2003). According research, there has been a clear negative trend in motor development and fitness levels among schoolchildren (Phtoiou, Anning, Meszaros, et al., 2008). One of the main reasons for this negative trend might be increased living standards together with unhealthy behaviour, which resulted in excessive energy intake and, together with a sedentary lifestyle, a decreased energy consumption (Ross, Janssen, Tremblay, 2000; Telama, Yang, 2000; Turi et al., 2017).

All students benefit from regular PE regardless of ability and skills if it is interesing, fun and developmentally appropriate (Capel, 2000). It is well known that regular physical activity, especially at a young age, increases psychosomatic development and motor performance, thereby significantly contributing to the optimization of body composition, fitness and altogether to better quality of life (Molnar, Erhardt, Felso, 2017). The harmony of physique and the operation of organs and organ systems are essential for schoolchildren because they are displayed at the level of motor performance. As a result, the analysis of fitness levels is of critical importance in terms of assessing somatic development.

Through a longitudinal study of a representative youth sample in the 1960s and 1980s, Bakonyi (1984) demonstrated that the physical development between the two examinations indicated major positive differences, while the trend in motor performance gradually decreased. Similarly, lately Phtoiou et al. (2008) and Meszaros et al. (2002, 2008) experienced negative trends in both anthropometric and motor parameters.

Daily Physical Education

Recognising these negative trends, the Hungarian government introduced daily physical education (PE) in the academic year of 2012-2013, which prescribes 45 minutes of daily physical activity for all students during school time. According to the legislation, daily physical education had to be introduced into the education system in first, fifth and ninth grades from September 1, 2012 and later in other grades as children proceeded with their
education. The new law placed a distinct emphasis on the in-school organisation of physical education and other sport and physical activities, aiming at the establishment of a more active and health-conscientious society.

The key strategic objective of the PE in the Hungarian National Core Curriculum (2012) is to help students develop and maintain healthy and physically active lifestyle (Fugedi, Capel, Dancs, & Bognar, 2016). Experience shows that the introduction of daily physical education might be a significant step in the motivation of schoolchildren towards lifelong sports and also in the improvement of their anthropometric parameters and motor performance (Mura et al. 2015; Szakaly, Ihasz, Konczos, et al., 2016). However, there have been limited studies examining the effects the introduction of daily physical education on the anthropometric parameters and motor performance of schoolchildren.

Research Questions

The purpose of the study was to examine the effects of a four-year-long daily physical education program on the anthropometric and motor parameters of 7-14-year-old schoolboys. In order to have a more homogenous sample and solid set of data, we focused our examinations on groups of boys. The reason behind this is that girls of a similar age often go through an early adolescent period, which comes together with a leap in the level of hormones that determine somatic and motor development (Loesch, Hopper, Rogucka, et al., 1995; Marceau, Ram, Houts et al., 2011).

Based on the abovementioned issues, it was assumed that daily physical education has a positive effect on the age-dependent development of young students in terms of fitness as related to anthropometric parameters and motor performance.

Method

Sample

Our tests were performed on two groups (2x8 groups) of 7-14-year-old boys (Table 1). Group 1 was measured before the introduction of daily physical education (three sessions per week during 2010-2011, n=562); Group 2 was measured four years after the introduction of daily physical education (five sessions per week during 2015-2016, n=551). All members of Group 2 have already been part of daily physical education for four years. The two samples did not include the same schoolboys, therefore it can be considered as a limitation in this study.

The tests were performed in six elementary schools in the city of Gyor, which are average in terms of indoor and outdoor PE infrastructure in Hungary, and therefore provide reasonable sample reliability. During the classification of our participants, the human-biological guidelines of Weiner and Lourie [18] was followed (the child is seven years old when older than 6.51 years and younger than 7.50 years). Those participants who can be designated as athletes represented less than 5% of the sample.
The tests were carried out in accordance with the suggestions of the International Biological Program (1969). Anthropometric characteristics were recorded by specialist personnel (2 persons) while motor performances were assessed by qualified PE teachers within one week of the anthropometric measurements. These measurements were performed using a certified Sieber-Hegner anthropometer and tape measure. Body weight was measured with a digital personal scale with a reading accuracy of 0.1 kg. For classical anthropometric parameters (body height, body weight), body mass index according to suggestion of the NETFIT (2013) and waist-hip ratio was also measured. In order to characterize endurance, the 20 m shuttle-run test was used, which counted the number of completed lengths.

Table 1. Description of sample: Number of school-aged boys in study Group 1. (2010-2011) and Group 2. (2015-2016).

<table>
<thead>
<tr>
<th>Age cohort</th>
<th>Number of students Group 1. (Academic year 2010-2011)</th>
<th>Number of students Group 2. (Academic year 2015-2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>74</td>
<td>72</td>
</tr>
<tr>
<td>8</td>
<td>60</td>
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<td>65</td>
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<tr>
<td>14</td>
<td>64</td>
<td>60</td>
</tr>
<tr>
<td><strong>SUM</strong></td>
<td><strong>562</strong></td>
<td><strong>551</strong></td>
</tr>
</tbody>
</table>

**Ethical Considerations**

The study was ethically approved by the University’s Ethical Committee and ethical consent was gained from every student and their parents. Parents were contacted in a teacher-parent conference prior to data collection and no objections were made regarding their child/children participation in this study.

All students voluntarily participated in this study. The research was based on the anonymity of the participants.

**Statistical Analysis**

In the first step of statistical analysis, descriptive statistical measures were calculated for the age groups. We analyzed the differences in mean values of measured and calculated variables using a single factor variance analysis (ANOVA) followed by an F-test. In the case of a significant F-value, critical differences were calculated according to Fisher’s suggestions. The assessment differences of age groups were characterized with the use of two-sample t-test. During the interpretation of our statistics, the maximum random error was defined at 5%. Measured and calculated data were processed using Statistics for Windows (version 13.2, StatSoft Inc., Tulsa, OK 74104, USA, 2006).
Results

Anthropometrical Data

The results of body height and its comparative statistics of schoolboys classified into Group 1 and Group 2 can be seen in Figure 1. According to age, the difference between the two groups was significant for both measures (F1.measures=272.92 p<0.000; F2.measures=210.12 p<0.000). A post-hoc analysis shows that the difference in body height means increased significantly in both assessments for consecutive age groups. Depending on age, variation coefficients were around 5%. According to the t-test, there was no difference between the identical age groups of Group 1 and Group 2.

Figure 1. Height of students in cm in age-cohorts in Group 1 (2010-2011) and Group 2 (2015/2016).

The difference in body weight (Figure 2) was significant in both tests (F1.measures=122.18; p<0.000; F2.measures=90.16; p<0.000) as related to age. The standard deviations around the means were similar for all measures, but increased with age. In the case of Group 1, the difference in means of the consecutive age groups increased significantly. In Group 2, there were no differences between the seven and eight year olds, while the difference was significant for older participants. Within the two groups there were no significant differences in respective body weights.
The internationally accepted body mass index (BMI) was used to characterise nutrition status (Marceau, Ram, Houts, et al., 2011). There was a significant increase in BMI (Figure 3) for both groups ($F_{1,\text{measures}}=22.73, p<0.000; F_{2,\text{measures}}=16.86; p<0.000$). However, within Group 1 there was a significant difference only between 7 and 8, 9 and 10, and 13 and 14 year old pupils. In the case of Group 2, the only significant difference was between 9 and 10 year olds (analysis of variance). The means of the two groups showed no significant differences in any of the age groups.
The difference between the age group waist-hip ratio (Figure 4) was statistically significant for both Groups (F₁.measures=2.51, p<0.000; F₂.measures=5.32, p<0.000). Nevertheless, the post-hoc analysis indicated significant differences in means for only the 13-14 year olds (1st measure), and 9-10 year olds with 13-14 year olds (2nd measure). According to the values of the t-test, the results of Group 2 were significantly higher for all age groups except for 10-11 year olds.

Figure 4. Waist-hip ratio of students in cm in age-cohorts in Group 1 (2010-2011) and Group 2 (2015/2016)

Data of Motor Performance

Based on the suggestions of Leger et al. (1988), we used the 20 m shuttle run test to measure endurance (Figure 5). The difference between means of the completed lengths was significant (F₁.measures= 9.57, p<0.000; F₂.measures = 4.15, p<0.000). After the post-hoc analysis, the mean differences of the test were significant except for 7-8, 11-12 and 13-14 year olds (assessment of Group 1). In the case of Group 2, the test results of consecutive age groups only showed statistically significant differences for 11-12 year olds.

The difference in means increased in the case of the Group 1 tests, while standard deviations decreased. The tests of Group 2 resulted in decreasing mean values amongst different age cohorts, while deviations around means increased. The motor performances of students in the age groups were significantly different during the examinations of Group 1 and 2 – except for 9-10 year olds. For 7 and 8 year olds, we found significantly better results for Group 2. However, this trend is the opposite for higher age groups, as in the case of older Group 1 subjects, for whom motor performance was significantly better.
Discussion

With our examination we tested the hypothesis of the effects of daily physical education on schoolboys' anthropometric characteristics and motor performance. Based on our results, we can state that daily physical education has a remarkable effect on the endurance of 7-8 year old boys. Similarly, daily PE classes have a positive impact on BMI and the waist-hip ratio and endurance of 10-11 year old schoolboys. We can consider these results positive, since the level of fitness has demonstrated a gradually deteriorating trend in the past decades. Despite this fact, no effect of daily physical education is present regarding the waist-hip ratio of 7-9 and 12-14 year olds and the endurance of 11-14 year olds.

**Anthropometric Data (Height, Weight, BMI)**

The difference in body height and body weight means was significant in every age group for both groups. There was a real difference between consecutive age groups. Standard deviations around mean values were generally large; larger than in previous decades (Meszaros, Szabo, Peng, et al., 2011).

Over the last 25 years, there has been a notable change in the employment structure and living standards of the Hungary and in the lifestyle of the population (Saghi et al. 2002; Photiou et al. 2008). Comparing our data against earlier representative results, we can state that our participants are taller and heavier in both test groups than in the earlier studies (Eiben, Panto, Barabas, 1989; Joubert, Darvay, Gyenis, et al., 2006).

A logical explanation for the increased body weight might be the bigger muscle mass of young boys. In contrast, examinations of body composition and motor performance...
suggest that the quantity of fat and muscle mass are unstable, but the increase in fat mass is dominant (Meszaros, Vajda, Meszaros, et al., 2007; Protzner, Trajer, Bosnyak, et al., 2015). In their research on differences in secular changes among schoolboys, Vajda et al. (2010) concluded that the acceleration in body mass increase is rather specific. They were not able to explain the bigger ratio of fat with the difference in body height in their study. Since the age-related change velocity of anthropometric parameters is very similar to the data published by Vajda et al. (2010), our results confirm the outcome of the mentioned researchers.

Body composition cannot be reliably estimated with BMI (Malina, Bouchard, Bar-Or, 2004) because the index is not sensitive to the allometry of different body composition factors and the justified age dependency of specific tissues’ density change (Neovius et al. 2004). Furthermore, Malina et al. (2004) emphasized that BMI can be used for the comparison of body weights of individuals, and is less suitable for indicating the specific components of the body.

Nevertheless, BMI has been justified and supported in sport science. If we calculate BMI according to the mean values described in the work of Eiben et al. (1989), we can say that the BMI mean values of age groups are smaller within the 1989 sample. The BMI values of age groups in both of our test populations are exceeding national averages – similarly to body height and body weight – and are approximating the 75th-90th percentiles. Freedman et al. (2009) have shown that when a child’s BMI reaches the 85th-90th percentiles, the probability of having body fat mass that increases health risks is rather high. In accordance with this fact, the values our participants have represent health risks.

**Anthropometric Data (Waist-hip Ratio)**

The simple-to-measure and calculate waist-hip ratio is a good predictor of overweight- and sedentary lifestyle-related civilization diseases (Dobbelsteyn, Joffres, MacLean et al., 2011; Heid, Jackson, Randall, et al., 2010; Huxley, Mendis, Zheleznyakov et al., 2010; Vazquez, Duval, Jacobs, et al., 2007). Researchers define the healthy upper limit of the waist-hip ratio at 0.90 (Kiss, Barna, Dankovics, et al., 2014; Nadas, Jerendy, 2009). There were limited meaningful differences in this study between the results of the age groups, but the means of the two groups significantly increased, with the exception of 9-10 year olds.

Although the waist-hip ratio of our participants could be classified as healthy for individuals, even in the case of Group 2, this is a warning sign because the increase we witnessed over five years draws our attention to a large-scale health hazard. If we accept the opinion of YoonMung and SoJung (2009), who say that physical activity has a protective effect on the amount of abdominal fat, then we can estimate that daily physical education might decelerate the growth of abdominal fat mass.

Our research confirms the trend published by Chaoyang et al. (2006), which shows that the waist-hip ratio of children has been growing in the past two or three decades. The
basic explanation reinforces the conclusion of the team led by Flegal (2002). Energy intake that exceeds consumption in the long term soon results in the accumulation of storage fat, and therefore to an overweight condition and obesity. However, the danger of intensified energy storage (which exceeds the age-dependent effects of biological regulation) puts school-aged children at health risk.

Eisenmann et al. (2004) draw attention to the critical nature of health education including nutrition in childhood. The authors emphasize energy intake and consumption, and concludes that during childhood and adolescence, 50% of energy intake that exceeds the basal metabolic rate is counterbalanced by daily physical activity. Frenkl’s (1990) calculations suggest that the energy needs for physical activity (not competitive sport training) is relatively low. Depending on the type and intensity of the activity, it takes about 25-30 minutes of continuous action to consume 100 kcal (419 kJ). As the excess energy intake of our children is greater than this, 75-90 minutes of daily activity is required to control the amount of storage fat. The other group of restricting factors is the development of motion techniques that do not evolve properly without an appropriate and well-timed training stimulus.

**Motor Performance**

The results of the shuttle run test points out that the effect of daily physical education on endurance improvement is not significant. The examination of Group 1 (before daily physical education) demonstrated that the difference in means significantly improved with age throughout the test. The results show that the change among age groups is not consistent and the standard deviations around mean values decrease with age, which indicates the improved homogeneity of groups. In the case of Group 2 (four years after the introduction of daily physical education), the age-related “motor” results are decreasing, while standard deviations show a growing trend, which means more heterogeneous groups.

Further researches should definitely discover the mechanisms that explain the unexpected result of Group 2, in which younger students (7-9 year olds) had better motor performance in comparison to their older (10-14 year old) peers, and also why the motor performance of Group 2 was significantly below the performance of the Group 1 students. A logical explanation might be that under-motivation, which is common during puberty, plays a part in this trend. Lack of interest, little or no success and enjoyment in PE have a clear negative influence on level of endurance and fitness. As a result, the mental, psychological and cognitive development of students also appears to be important in order to demand a long lasting health-conscious, physically active lifestyle. This is particularly important, as improved lifestyle promotes obesity in a young age as well, which has a negative effect not only on somatic, motor and psychic development, but – among others – on the cardiovascular system (Koller, Lelbach, Kovacs, 2017).
Conclusion

Despite the introduction of daily physical education, there is no difference between children taking part in daily or regular (2-3 sessions a week) PE classes in terms of relative body fat mass (Protzner, Trajer, Bosnyak, et al. 2015). This study also confirms that the positive effect-mechanism of daily physical education on anthropometric and endurance tests are minimally apparent for a four-year research period. It is worth noting that each alteration in the curriculum provides pedagogical and professional development possibilities in the long term, but brings major methodological and content challenges in the short run (Ennis, 2013).

Our study mainly highlights the challenge caused by the introduction of daily physical education. The fact that the legislative changes did not clearly bring improvements in anthropological and endurance results might also be caused by a number of external (facilities, tools, curriculum documentation, school management, etc.) and human (knowledge, motivation, methodology and attitude of PE teachers) factors as well. Based on experience, we can state that, in the long term, the complex effects of systematic and organized physical education with proper content and methodology are definitely positive on psychosomatic development (Ericsson and Karlsson, 2014).

Following the suggestion of WHO and the results of Szmodis et al. (2014), systematic exercise for children and students is a minimum of sixty minutes of physical activity at moderate intensity. What we should expect from daily physical education is for it to be methodologically sound, enjoyable, motivating, and successful, while reaching at least a medium or even high level of intensity relevant to age (Mura, Rocha, Helmich, et al., 2015). There is no doubt that the establishment of exercise therapy for obesity requires the involvement of professionals from many disciplines (Simonyi, Pados, Bedros, 2017).

School is still one of the most important scenes for education (though the effects of the internet and media have gradually prevailed and are not always positive), where there is an excellent opportunity to establish health-conscious habits, standards and attitudes through examples. It also seems important that the teaching-learning process of physical education focuses on individual abilities, skills and interests. Daily physical education is an important tool for prevention, and also assists in the improvement of quality of life and socialization for a life-long, health-conscious and active lifestyle, as emphasized in our National Curriculum of 2012. In order to achieve the optimal effects of daily physical education, social expectations, support at the macro-level and the support and attitude of different stakeholders, plus well-working teacher-student relationships at the micro-level have major influences (Fugedi, Capel, Dancs, & Bognár, 2016). It might be important – and might just as well improve the effectiveness of PE classes and the motivation of students towards physical activity – to link daily physical education to health-conscious school programs, where students could be motivated and engaged with the use of interactive and experience-focused knowledge transfers suitable for generations Y and Z (Feith, Melicher, Mathe, 2016).
It was not an objective of this study to measure the previously mentioned influential factors related to the implementation of DPE. However, aspects besides anthropometrical and motor performances, researchers might want to discover the impact of such curriculum changes on these factors in the near future.

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Health-Oriented Education in Slovakia Related to Physical and Sport Education

Elena Bendikova

Abstract

The aim of the study, based on the content analysis, is to present a current situation about a health of a school population in Slovakia, through a general physical performance, as a result of the curricular transformation of the physical and sport education in Slovakia after 1989, which is related to the educational process of the 21st century, pointing to a basis of a modern transformation regarding with a pre-graduate preparation of students of a teaching orientation. From the point of view of the methods of data acquisition, we based on the available literary sources, relying on statistical data of the health, which were published by the Statistical Office of the Slovak Republic, as well as using the Internet portal of the Ministry of Education, Science and Research, National Institute for Education with the intention of scientific and academic studies, related to a field of research. While processing the available information, we used the methods of the analysis and synthesis with the support of the inductive and deductive procedures. In the final part of the study, we have come to the conclusion that the systematic health support of the school population and education to the healthy lifestyle is the necessary part of the educational process of the physical and sport education, which is related to the formation of the professional identity and status of the teachers of the given subject.

Keywords: physical activity, Physical and sport education, health

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Introduction

The quality-of-life issues have come to the forefront over the past decades in the USA, Europe and, thus, in Slovakia as well. Sedentary lifestyle is common in more than 84 percent of the population, regardless of age or gender. It worsens the conditions of human life and leads to unsatisfactory health indicators, also referred to as “lifestyle diseases”. According to international comparisons, Slovakia stands out the most in terms of morbidity and premature mortality relating to preventable diseases, which occur among school population as well. The comparisons of morbidity made per 10,000 children in the period from 1996 to 2008 show that the number of disorders and diseases have doubled (children aged 0-14 years) or even risen higher (adolescents aged 15-19 years). Research shows that approximately 18 percent of children suffer from overweight, 7 percent of children are obese and the situation is becoming worse and worse. Severe obesity is connected with twelvefold increase in mortality of people aged 15-35 years in comparison with lean people. In 2002, the Slovak project called MONIKA found that 57.4 percent of the sample group consisting of 68,767 people aged 15-64 years were overweight or obese. What is more, type 2 diabetes mellitus (2DM) is becoming increasingly prevalent. Since 2000, the number of diabetics has risen by 27 percent. Since this disease is associated with obesity in children, incidence of which is on the rise, we can expect also increase in childhood 2DM. Up to one third of children in Slovakia (“only” 25 percent of children in the Czech Republic) have high cholesterol levels. Incidence of influenza and influenza-like illnesses in children has risen by 34 percent. Besides this, 63 percent of children suffer from allergies. Prevalence of functional and structural disorders of the musculoskeletal system among children and adolescents is also rising (about 65-86 percent). Higher incidence of the aforementioned diseases and disorders is associated with a lack of physical activity. At the present, children in Slovakia have on average 13,000 lessons at elementary and secondary school. About 7 percent of them are devoted to physical activity and 93 percent to theoretical education. At present, not enough attention is being given to physical and sport education, as it is e.g. in Poland or Hungary. As a result this subject lags behind other subjects at elementary and secondary schools (Bendikova, 2012). What is more, the quality of education in Slovakia relating to lifestyle and prevention of lifestyle diseases is not as high as it is in Western European countries (Vojtova & Hrčka, 2011). Only education that will motivate people to be physically active from childhood and other effective preventive measures incorporated in health policy can bring Slovakia closer to developed European countries.

Background Information

Health, quality of life, lifestyle, fitness and physical activity are being increasingly discussed also in connection with contemporary physical and sport education at Slovak elementary and secondary schools. This is also due to the fact that the number of Slovak pupils and students who are excused from physical and sport education classes because of various diseases and disorders (including 27.7 percent to 39.6 percent of boys and 38.2 percent to 48.1 percent of girls) is on the rise. According to the Ministry of Education of
the Slovak Republic (ME), approximately 30 percent of pupils and students are regularly excused from physical and sport education classes. The fact is that more and more children and adolescents spend their free time doing sedentary activities. Bendikova (2011) proves that this tendency is real by giving several indicators that confirm a decline in physical activity from childhood to adulthood. Sedentary behaviour in early childhood is rare (approximately 6 percent in boys and about 8 percent in girls). However, it occurs in more than 20 percent of population aged 20 years (22 percent in men and 25 percent in women). High-intensity physical activity declines from 71 percent to 43 percent in men aged 20 years and from 66 percent to 28 percent in women of the same age. Low-intensity physical activity in men drops from 39 percent in childhood to 22 percent at the age of 20 years and from 22 percent in childhood to 21 percent at the age of 20 years in women. The ME points to the fact that up to 70 percent of school children and adolescents spend “four hours of their daily free time working with their computer or the Internet, watching TV or playing with their mobile phones.” According to the other research investigations (Nemček, & Bergendiova, 2013; Antala, 2014; Kurkova, Nemček, & Labudova, 2015; Kurkova & Nemček, 2016), only every “third pupil or student” does participate in regular organized physical activity. What is more, indicators of physical performance in today’s school children and adolescents are lower in comparison to physical performance indicators of their peers 25 years ago. Physical performance decline was caused also by reduction of the number of physical and sport education classes from 3 to 2 lessons per week in 1996. Today, boys aged from 11-14 years have approximately the same aerobic endurance like girls of the same age 25 years ago. Furthermore, their lower limb strength is reduced even more. Declining physical performance among girls can be demonstrated by decreased aerobic endurance, lower limb strength, running speed and orientation in space. Therefore, it is necessary to point out that one of the primary tasks of all human beings is to take care of their health. WHO (2010) defines health as a state of complete physical, mental and social well-being, which ensures optimum self-regulation and balance between individual functions of an organism and its external environment – homeostasis. According to WHO (2010) human health depends 21 percent upon ecological conditions, 21 percent upon genetics, 8 percent on quality of health care and up to 50 percent upon lifestyle. In contrast to the past, more and more emphasis is being placed on personal responsibility for our own health and health of people that we take care of. Health is also a category protection of which is stipulated by law. In the Slovak Republic, protection of health is governed by the Act No 355/2007 on Protection, Support and Development of Public Health. In the past, health was determined mainly by biological factors. At present, it is being increasingly influenced by social factors. Health cannot be obtained as a genetically determined and unchangeable condition. The genetic basis is only a biological potential that can develop in a positive or a negative way (Bendikova, 2014).

Various sports and recreational physical activities, which are included in physical and sport education syllabi, play an important role in terms of disease prevention and protection of health of school children and adolescents. They are important social
phenomena that should become part of school population's spare time (Muller & Racz, 2011; Cardon et al., 2012; Mosonyi et al., 2013; Dobay, 2007, 2015; Ghyppo, Tkachov & Orlenko, 2016; Nagy & Muller, 2016; Szokol, 2016; Hidvigi et al., 2017; Muller et al., 2017).

In the past, physical education was the substance of survival. Nowadays, it is the same considering deeper sophisticated reflections on survival in relation to philosophy of movement. Therefore, we would like to point out that the major changes in the Slovak curricular transformation concerning physical and sport education after political changes in 1989 took place in 2008, when the ME proposed a new school act that was approved by the National Council of the Slovak Republic on 22 May 2008. On 19 June 2008, the National Education Programme (NEP) was approved at the executive staff meeting of the ME. It defines general aims of education, curriculum framework as well as standards for individual levels of education determined by the International Standard Classification of Education – ISCED, which was adopted also by Slovakia. On 1st of September 2008, a new School Act No 245/2008 Coll. came into force. It launched an education reform of Slovak nursery, primary and secondary schools.

The NEP is a major curricular project which includes graduate profiles as well as curriculum frameworks and curricula for individual grades. It presents the first framework level of a two-tier participation model of school management. What is more, this programme specifies general aims of schools, school children’s key competences (capabilities) and curricular content of education.

The NEP consists of learning (curricular) areas (the fields relating to general education issues and development of key competences), which overlap and interrelate. The content of all learning areas is divided into individual subjects. Schools can add other subjects to these learning areas. The content of lower secondary education is divided into eight learning areas and the content of higher secondary education is divided into seven learning areas, which are based on the definition of the content of education and the key competences. Besides the school subjects, the NEP includes also interdisciplinary topics that are incorporated in all learning areas.

Curricular transformation and the major changes relating to physical education were as follows (Antala, 2009; Bendikova, 2012; 2014):

- Alteration of the name of the learning process. The name of the subject - physical education - was altered to physical and sport education at the second stage of primary schools and at secondary schools.
- The content of physical and sport education was integrated in the learning area called Health and Movement, which determines the aims of the subject as well as key individual and subject competences: motor, cognitive, communication, learning, intrapersonal and attitude.

Openness and diversity of the physical and sport education syllabus. The traditional thematic units were replaced by new modules. The syllabus was divided into four
modules, each of which has its own aims. The content of physical and sport education at primary schools is based on thematic units, which are divided into basic and optional units (Table 1).

**Table 1. Overview of thematic units at primary schools (Bendikova, 2012)**

<table>
<thead>
<tr>
<th>Basic thematic units</th>
<th>Optional thematic units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge relating to physical education and sports</td>
<td>Untraditional physical activities</td>
</tr>
<tr>
<td>General gymnastics</td>
<td>Skating</td>
</tr>
<tr>
<td>Athletics</td>
<td>Inline skating</td>
</tr>
<tr>
<td>Fundamentals of gymnastic sports</td>
<td>Snowboarding</td>
</tr>
<tr>
<td>Sports games</td>
<td>Exercises at the gym</td>
</tr>
<tr>
<td>Swimming</td>
<td>Aerobics, water aerobics</td>
</tr>
<tr>
<td>Seasonal activities</td>
<td>Fighting sports and self-defense</td>
</tr>
<tr>
<td>Compulsory optional thematic unit</td>
<td>Ice hockey</td>
</tr>
<tr>
<td>Testing</td>
<td>Dancing (ballroom, folk ...)</td>
</tr>
</tbody>
</table>

Total 66 lessons

Module 1 Health and Its Disorders. Pupils and students acquire knowledge continuously during lessons at school.

- Primary schools: The aims of Module 1 are fulfilled by means of a thematic unit called “Knowledge Relating to Physical Education and Sports”.
- Secondary schools: Teachers can use one or two theoretical lessons in each grade. Physical activities of this module constitute 10 percent of the overall content of education.

Module 2 Healthy lifestyle. Pupils and students acquire knowledge continuously during lessons at school.

- Primary schools: The aims of this module are partly achieved through a thematic unit called “Knowledge Relating to Physical Education and Sports”.
- Secondary schools: Teachers can use one or two theoretical lessons in each grade. Physical activities of this module constitute 10 percent of the overall content of education.

Module 3 Fitness and Physical Performance. It is taught continuously or en-bloc.

- Primary schools: The aims of Module 3 are fulfilled by means of all other thematic units. A thematic unit is deemed to be completed as long as the yearly plan allocates at least 6 lessons to its teaching. At least one optional thematic unit is obligatory in each grade.
- Secondary schools: recommended amount is 30 percent of the total lessons allocation in each grade. All motor skills should be gradually developed throughout the four years of study by means of different physical activities included in the fourth module.
Module 4 Sports Activities within Movement Routine.

- Primary schools: The aims of Module 4 are achieved by means of all other thematic units.
- Secondary schools: This module constitutes approximately 50 percent of the total lesson allocation. Teachers in each grade choose at least two areas from this module. They opt for those activities that students are interested in, that are traditional for their school, that the teachers are specialized in or activities that are most suitable in terms of equipment at a particular school. The area called Sports Activities in Natural Environment should be selected at least twice in a four-year period (e.g. ski or snowboarding courses, swimming enhancement courses, etc.). All four areas must be covered during the period of four years. We recommend differentiation of the content in winter and summer terms and including a vast array of physical activities particularly in the first grade.

The output of this module should be motor competence along with an integrated attitude towards movement, sports activities and care for health.

- Changes in the aims of physical and sport education. As far as the aims of physical and sport education are concerned, there is a shift from performance-oriented learning towards development of students’ competences, values and attitudes. The aims focus more on care for health and leading of a healthy lifestyle – physical and sport education should incorporate knowledge, habits, attitudes and skills relating to movement, health and healthy lifestyle, which are developed by means of different forms of physical and sport education at schools.
- The current school reform adopted in 2008 set the minimum number of physical and sport education lessons to two lessons per week (Table 2), which means 66 lessons per school year in all grades of primary and secondary schools. The new education programme allows three or even more physical and sport education lessons per week. As a result, pupils and students can choose preferred physical activities that boost their health, fitness and interest in sports. Individual exercise programmes let them express their own opinions and develop active attitude towards various physical activities. In this regard, Bendikova (2009) points out that even under the rule of Maria Theresa, schools had to teach two lessons of physical education per week.

Table 2. Numbers of physical and sport education lessons (Antala, 2009; Bendikova, 2012)

<table>
<thead>
<tr>
<th>Stage of education</th>
<th>1990 number of lessons per week</th>
<th>1997 number of lessons per week</th>
<th>2008 number of lessons per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st stage of primary schools</td>
<td>3 lessons</td>
<td>3 lessons</td>
<td>2 lessons + SEP</td>
</tr>
<tr>
<td>2nd stage of primary schools</td>
<td>3 lessons</td>
<td>3 lessons</td>
<td>2 lessons + SEP</td>
</tr>
<tr>
<td>Secondary schools</td>
<td>2 – 3 lessons</td>
<td>2 – 3 lessons</td>
<td>2 lessons + SEP</td>
</tr>
</tbody>
</table>

Legend: SEP – School Education Programme
It is also necessary to point to physical activities that school children and adolescents do in their free time. Spare-time physical activities within physical education at schools are organized in cooperation with social, youth and athletic organisations. They are aimed to proper development of motor skills and adopting physical activity at different ages. Interest-based physical education prefers health benefits of physical activity (physical and mental relaxation, health, fitness, functioning of immune system, obesity, lifestyle diseases, etc.) to maximum performance. It provides optimum range of exercises (volume, intensity, frequency, structure) for various age groups and suitably supplements compulsory physical and sport education. However, we need to bear in mind that interest-based physical education also fulfils basic formative and information function. It should be continually put into practice by physical education teachers, who must try to convince their pupils of the importance and effects of regular physical activity on their health and healthy lifestyle (Bendikova, 2012).

In Slovakia, interest-based physical education is provided within an optional subject called Ball Games and Physical Training at elementary schools and Movement and Sport Education at secondary schools (both are optional subjects). Furthermore, it includes sporting clubs, competitions and also a subject called Sports Training, which is taught in sports classes for gifted pupils and students. At secondary schools, interest-based physical education is provided through an optional subject called Movement and Sport Education, which is usually focused on extension of basic thematic units (mainly sports games). Pursuant to Article 7, par. 8 of the Act No 597/2003 Coll. on Financing of Primary, Secondary Schools and School Facilities, as subsequently amended, school vouchers have been used to fund spare-time activities, including sports, since 2004. All pupils at elementary schools and students at secondary schools are eligible for school vouchers that are issued by their schools at the beginning of a school year. School headmasters are obliged to ensure that every pupil gets a school voucher pursuant to the aforementioned act. School vouchers for a particular school year are issued by headmasters at the beginning of September. Pupils can give their vouchers to any school or school facility that will provide them with education or training within the time limit determined by self-governance educational authorities so that these authorities can advise a particular regional authority of the number of received school vouchers by 30th September. By giving their school vouchers, pupils transfer state funds allocated for interest-based education and training to particular schools or educational facilities. If pupils attend extracurricular clubs and activities in several schools or educational facilities, they can give their voucher to only one of them. Pupils can give their school vouchers only to schools or educational facilities that are listed in the net of schools and school facilities of the Ministry of Education of the Slovak Republic. Providers of extracurricular education and training receive state funds for school vouchers provided that they obtain school vouchers by the 30th September and on the condition that pupils attend the stipulated number of extracurricular lessons (at least 60 lessons per school year). Schools and educational facilities are eligible for special state funds allocated for extracurricular activities and education as long as (Bendikova, 2012):
a) they obtain school vouchers from their holders (pupils and students at primary and secondary schools) that are valid and properly filled out,
b) they advise their self-governance authority of the number of received vouchers by the 30th September,
c) pupils attend the stipulated number of extracurricular lessons.

School vouchers represent special yearly state funds allocated for extracurricular education of pupils and students at primary and secondary schools. These funds are allocated for interest-based education, e. i. not only for sports. One school voucher in 2011 was worth 2.8 euro per month. Financing of school vouchers is as follows: in 2010, the total allocated funds for school vouchers were worth €17,783,774 (including transfer from the year 2009 worth €189,315 and the budget category of the Ministry of Education, Science, Research and Sport of the Slovak Republic from the year 2010 worth €17,594,459). In 2010, these funds were allocated to providers of extracurricular education, including also primary art schools, kindergartens and educational facilities governed by municipalities, higher territorial units as well as private companies and church organisations. The most funds were allocated to municipalities (€10,494,614) and higher territorial units (€4,732,534). There is no information available on how many percent of the school voucher funds are used for sports activities.

In the school year 2012-2013, allocation of school vouchers that finance sports activities at elementary and secondary schools changed. These changes regarded “sports vouchers” for all children and adolescents who do extracurricular sports activities, regardless of the place. This opened the space for competition especially between sports clubs. Facilities that provide the most interesting sports activities can attract more children and adolescents.

The extent of the reform depends on several objective and subjective factors as well as physical and sport education teachers and their knowledge, practical and theoretical competences and assertion in relation to other subjects. Therefore, it is necessary to change pre-graduate training and further education of teachers. Practical experience currently shows that pedagogical capabilities of graduates of teacher training faculties are not satisfactory. What is more, there are new demands that teachers have to meet resulting from changes in the society and, especially, interests and needs of pupils and students at primary and secondary schools. Prospective teachers (physical and sport education teachers at schools) often lack corresponding theoretical knowledge, practical skills, innovation tendencies and interdisciplinary associations, which contribute to development of pupils’ positive attitude towards learning. In accordance with the Bologna Declaration, universities adopt a two-level system: pre-graduate and graduate education. According to Holla (2007), this structure of education is gradually being put into practice. Education is a dynamic process and teachers of all ages are its important part. Therefore, a new concept of teaching as a profession should be based on the system that will ensure further professional development of teachers and enhancement of their professional competences and performance. Quality of teachers and their professional growth are the
most important requirements relating to a curricular reform. In terms of teacher training, the main competences and aims of a teaching process are based on the questions such as How?, Why?, When?, etc. Competences of teacher training graduates include subject-based, psycho-diagnostic, communication, diagnostic, planning, organizational, advisory and consultation skills as well as self-reflection. Pre-graduate teacher training consists of four components: general knowledge, pedagogical and psychological component, specialized and subject-based component and pedagogical practical experience. In this regard, it is necessary to point out that pre-graduate teacher training should be based on teacher job descriptions that are not officially stipulated in Slovakia. As a result, there are not specific demands concerning graduates of teacher training universities and colleges. What is more, study programmes of various faculties show that there are qualitative and quantitative differences between them regarding a number of lessons, teaching strategies, motivation, numbers of students and quality of teaching staff (Turek, 2001, Labudová, 2008). Curricula at teacher training faculties include 75 percent of subjects devoted to a particular subject specialisation and 25 percent of subjects related to pedagogical competences, which is not sufficient in terms of pedagogical practice and capabilities. In this regard, we have to point out that Article 25 of the World Teachers’ Charter, which is a UNESCO document adopted worldwide, the teachers who teach pedagogical disciplines (but also other teachers) at universities should have teaching experience at schools for which they train their students and prospective graduates. If possible, they should renew their experience by teaching at schools. However, this requirement is not fulfilled at many teacher training faculties in Slovakia and nobody promotes its fulfilment (Turek, 2008). Another problem is that graduates of teacher training faculties are not mentally prepared for their profession. Their psychological resistance during lessons, including physical and sport education lessons, is not sufficient because they are confronted with pupils’ behaviour out of the classroom and under different safety conditions. The truth is that any capability or skill is acquired more effectively through performance, exposition and fixation than by means of the transfer in a communication process. In this regard, the idea that experience in not transferable is worth mentioning. According to the Declaration of Helsinki, higher education should put emphasis on personal and social capabilities of prospective teachers, including communication, adaptability, creativity, empathy, practical experience, knowledge of the school system and its functions and ability to pass on their knowledge of the subjects they specialise in (Hallawel, 1987). According to Černotová (2009), the aforementioned factors should confirm validity of our data. This means that practical aims in teaching require an appropriate relationship between teachers, pupils and facts to be taught. The aim of a teaching process is not verbal knowledge but knowledge of real things and phenomena in the surrounding world as well as their interconnections and relations. It is important that teachers comply with objective relations and deep knowledge defined in didactics. Therefore, it would be useful if teacher training universities had their own “faculty” schools, as Turek (2008) claims. This would ensure quality of education and verification of innovative and more effective teaching procedures and methods, which could be tried and practised by teaching staff at primary schools, secondary schools and universities as well as by prospective teachers. In
this regard, it is necessary to combine theory and practice. At present physical and sport education at schools directly or indirectly opens the space for curricular diversification and implementation of innovative lessons (Bendikova, 2009). According to Bendikova (2016), liberalisation of physical and sport education syllabus places heavy demands on teachers concerning the selection of new untraditional physical activities, which makes the subject more attractive. One of the benefits of the school education programme should be more diverse lessons (exercises with fitness balls, overballs, expanders, etc.), which have a positive impact on physical, functional and motor development as well as health-oriented physical fitness in pupils and students with health problems.

**Conclusion**

People were aware of positive effects of physical activity on human health even in ancient and medieval times. Physical activity is an important part of a healthy lifestyle and people should adopt a positive attitude towards it from the early childhood. Systematic school health promotion and education oriented towards a healthy lifestyle have been incorporated in the learning and educational process. Validity and significance of teacher training open the space for changes in study programmes, which are closely related to development of professional identity and status of teachers and the necessity to transfer theory into practical physical and sport education lessons in Slovakia.

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**References**


Institutional Environment of Students’ Sports Activities in Central Europe

Klara Kovacs, Andrea Lentene Puskas, Marianna Moravecz, David Rabai & Eva Bacsne Baba

Abstract

The aim of our study is to scrutinise the differences in sporting habits, sport motivations of students, and the institutional environment of practising intense sports in higher education institutions of Hungary, Slovakia, Ukraine, Romania, and Serbia. In our previous examination, we compared the sporting habits and the socio-cultural factors affecting sports activities of students country by country. We learned that even though students of this region are characterised by similarly low frequency of sports activities (merely once a week), they are under different influences in the individual countries, so the need for an institution-by-institution comparison inevitably arose. We use both quantitative and qualitative methods. In the quantitative part of the research, our questionnaires were answered by 2,017 students from 15 institutions in 2015; in the qualitative part, we conducted eight interviews with institution leaders responsible for sports and physical education teachers. The conclusive finding of our research is that the sporting habits of students in higher education are obviously influenced by the institutional effect. This research has confirmed that an adequate sports infrastructure, a wide range of options, well-organised sport programs, and an institutional sports strategy can increase the amount of students’ sports activities.

Keywords: sports, higher education, institutional effect

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**Introduction**

According to the determinative document of health promotion, the Ottawa Charter states that “health is created and lived by people within the settings of their everyday life; where they learn, work, play and love” (WHO, 1986). This statement also emphasises the responsibility of institutions and, in our case, higher education for promoting healthy lifestyle. Even more so, since the time spent in higher education is the last chance for youths to practise any sports activity in an organised manner on a weekly basis (Lentene, 2016; Pfau, 2017).

One of the duties of universities and colleges, as the place of students’ socialisation, is raising awareness of health-consciousness, skill development, and individual and social responsibilities (Tomusk, 2016). We cannot forget about the importance of management that facilitates the welfare of students and workers, a well-operated communications system, an environment that maintains health, and through their research activities, positively influences the health of the wider population. From among all other health-conscious behaviours, the beneficial effect of physical activity on physical and mental well-being is well-known (WHO, 2010; Biro, 2015). Physically active adolescents eat more healthily, smoke less, and are less inclined to become overweight (Piko and Keresztes, 2007). Higher education can contribute to these advantages with its institutional background. With the help of infrastructure of higher education institutions, it can ensure the upkeep of sports communities, which also aid social and emotional development as well as the general and psychological well-being of students (Taliaffero et al., 2010; Kovacs, 2014).

By doing sports, students can acquire skills that are essential if they want to be successful in life (e.g., cooperation, problem-solving, being open to society), and sports activities have an all-over positive impact on students’ efficiency in their studies (Serbu, 1997; Kovacs, 2015a; Biro, 2015). Further integral components of higher education, besides acquired knowledge and infrastructure, are the roles of instructors and peers. Based on previous research data, if a student knows an instructor who practises sports, the student is twice as likely to do so even if only occasionally (Kovacs, 2015).

According to the Act on National Higher Education (2011), the organisation of regular physical activity and practise of sports at universities is indispensable to maintain a healthy lifestyle and quality of life (Lentene, 2016; Kaposvari, 1997; National Sport Strategy, 2007). The supervision of the institutional environment of sports practise is necessary and important for the sake of revealing differences between institutions and learning about right practises and new alternatives.

The aim of our study is to scrutinise the differences in sporting habits, sport motivations of students, and the institutional environment of practising intense sports in higher

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18 This study was conducted with the support of the Janos Bolyai Research Scholarship.
education institutions of Hungary, Slovakia, Ukraine, Romania, and Serbia. In our previous examination, we compared the sporting habits and the socio-cultural factors affecting sports activities of students country by country. We learned that even though students of this region are characterised by similarly low frequency in doing sport activities (merely once a week), they are under different influences in the individual countries individually, so the need for an institution-by-institution comparison inevitably arose. (Kovacs, 2016). We could see in the examined institutions of these countries, especially in Ukraine, students are rather unsatisfied with the sports options offered by their schools or towns. However, the differences are well-marked even between the schools themselves, so the need for an institution-by-institution comparison inevitably arose. To understand the nature and causes of the disparities in the sports habits of students, we must take into consideration the sports options offered by the individual institutions: infrastructure, programs, and concept.

In this study, we used the database of the 2015 IESA research of the Center for Higher Education Research and Development Hungary (CHERD-H) to compare the sports habits of the students at higher education institutions and the institutional perception of sports options (N=2,017). We asked the students of 15 universities/colleges in five countries, representing the majority, but in this enquiry, we excluded two institutions from the analyses because of the small number of respondents. We attempt to explain the discrepancies between institutions through the sports options they offer, their sports concept, and the differences between these two by interviews and observations. In this way we can understand what options they can offer and how institutions are a part of students’ sports socialisation, although we accentuate that the institutional environment is only one aspect of the explanation. For these purposes, we used observations, internet resources, and interviews.

The Role of Institutional Effect and Environment on Students’ Sports Habits

In the theoretical background of our research, we synthesise the essence of the institutional effect. We demonstrate what role of institutional impact exists on students’ sporting habits and thus their health-consciousness, along with the (higher educational) environment. The institutional effect is divided into three factors by most authors. They are formal characteristics, institutional characteristics, and environmental impacts. As Clark’s (1960) concept points out, the sum of the influence of the type of institution, the hidden message of the structure of the syllabus, and the appropriate communication from the instructor’s side leaves us with the most important impact of the institution, which can also be regarded as the oldest theory of the institutional effect. Another theory, probably the most comprehensive one, introduces the four dimensions of higher education, which are the following: the composition of the student-instructor society, the static and dynamic features of the organisational structure, the physical environment, and the institutional culture itself (Strange, 2003). According to Pusztai (2016), the institutional effect is made up of an environment created by institutions that are provided
by potential opportunities and the orientation and interaction of students in such directions.

It is important to note that the amount of institutional contribution of certain faculties and institutions may vary in light of the social background of students (Pusztai, 2010). This different social background means that the knowledge and skills that students already have when they enter higher education establishments will not be shaped in the same way and to the same extent in different institutions and their subdivisions. Thus the environmental impulses vary not only from institution to institution but also from faculty to faculty (Pusztai, 2010). The theory of pedagogical resources (Astin, 1984), which primarily focuses on those resources that are supposed to contribute to studying is based on this approach: these resources are material conditions (e.g., infrastructure and laboratories), personal conditions (e.g., well-trained instructors, consultants, and supportive staff) and financial sources (e.g., material aids, supported research, and development programs). Rendering this theory as our foundation, we hypothesise that adequate sport-infrastructural options, programs, and a sporty atmosphere on campuses, as institutional effects, contribute to students’ doing sports and to their sports socialisation in the long run. As for youth in higher education, this ‘university period’ is their last chance to practise sports activities in an organised manner. Therefore, higher education institutions play a significant role in sports orientation, in shaping students’ attitudes toward sports and attracting even more of those who have not participated in sports before besides the ones who have (Lentene, 2016; Pfau, 2017). For all this to become a reality, more alternatives for doing sport need to be provided, and new sports disciplines need to be offered, although interferences may arise in the case of most of the institutions due to the lack of developed infrastructure, human resources, and financial difficulties (Pfau, 2017; National Sport Strategy, 2007).

The results of these institutional effects can be deduced from the experiences of the years spent in higher education, but since we focus mostly on and scrutinise full-time education, we can say that the change can be attributed to the formal and informal educational impacts of universities (Pusztai, 2011). For a more relevant deduction of the influence of institutional contributions, we would need an analysis of longitudinal databases with large models from different perspectives, but in this study, we did not have the opportunity to make analysis longitudinally (Pusztai, 2011).

Moreover, the institutional effect can influence several segments of effectiveness among students, such as their attitude toward sports and health. Kovacs et al. examined the effect of higher education on students’ health-behaviour and sports habits. Practising intense sports is used as an indicator of efficiency throughout the analyses, and the institutional effect is measured by doing sports with university friends or being a part of a university fan club. The foremost result of the two-variable analyses of the research demonstrates how sports workouts with both university friends and social influences outside university reduce the frequency of sports activity more than expected. A test based on logistic regression indicates, however, that the more important health promotion is to students,
the more sports activity they will engage in—more than could have been expected based on social background (Kovacs et al., 2016). Research conducted in the northern region of the Great Plain also demonstrates that 32% of students prefer spending their free time with their peers (Mosonyi et al., 2013).

Muller (2009), researching the pastime habits of students majoring in sports, assessed that 65.6% of students (172 people) practise sports in their free time, and 59.2% of them (155 people) take part in sports events either as spectators (passively) or as participants (actively). Furthermore, career orientation and the motivation to lead a healthy life is present more dominantly in the case of sports majors since this is one of the pastime activities they practise most often and are interested in even outside of school. In other research, Pfau examined several Hungarian University faculties (BUTE, UD, UP, SU, and SZU) from the aspects of students’ sports habits, preferences of location, and the reasons behind the choices (Pfau, 2016). According to her results, sports habits are characterised by two main tendencies: (a) students do not do sports competitively as much during their years at university, but (b) at the same time, they do sports more frequently in their free time. We can also observe a drastic change in pastime habits in the past few decades (Boda et al., 2015). Another interesting and thought-provoking result is that students prefer doing sports off campus rather than on campus. As for the reason of giving up sports, students most often referred to their lack of time (Pfau, 2016), but according to research conducted in the Partium and other universities/colleges outside the Hungarian border, dissatisfaction with sport options offered by institutions also appeared among the explanatory factors (Kovacs 2015a; Kovacs, 2016). In Hungary, it was the University of Debrecen that first applied a sport strategic and conceptual approach in 2005 (Bacs, 2011; Bacs & Bacsne, 2014). With the shaping of a new Sport Concept (2005) corresponding to the principles of the EU, a new, complex development program was launched at the university, which entails continuous changes and structural modifications that conform to legal regulations and opportunities (Bacs, 2011; Lentene, 2016). Developing sports in such way, operating different fields of sports in a complex structure, serves as an example to many of the higher education institutions of the country and highlights opportunities for improvement in the sports life of students in higher education environments, which could popularise regular physical activity among students.

All in all, we can say that the approaches of the institutional effect are different from each other. Researchers of the topic have examined it from various aspects. Doing sport is also influenced by the institutional contribution, and we can differentiate between faculties, too, on the basis of social background (Pusztai, 2010).

Research Questions and Methods

In the previous stage of our research, we compared the sports habits and the social and demographic factors determining the frequency of doing sports among students country by country. In this study, we compare the students of the institutions on the basis of questions in connection with sports and differences in the sports life and infrastructure.
of the institutions. Thus, we connect this to the differences in sports options since the small item numbers do not allow for an assessment of the joint effect of more explanatory factors. For this reason, our explanations are hypothetical.

We applied a combined, both aggregate and stratified, method of sampling: First, we stratified the population faculty by faculty, and then we chose seminar groups at random and asked them to fill out our survey. Accordingly, the item numbers change faculty by faculty in proportion to their total number of students; hence, there is a higher number of items of certain faculties. This is the reason for the prominent number of students from Debrecen, which has around 30,000 students. Such an enormous institution cannot be dealt with uniformly. Even in an infrastructural sense, the university has five campuses in Debrecen alone, and one more in Nyiregyhaza and Hajduboszormeny as well. The main building and the campuses of the faculties of medicine in Debrecen are situated next to each other, so for this reason and because of the low number of people taking part in the research from the faculties of medicine, we examined them one. We also considered the separate outplaced departments of bigger institutions such as the department in Satu Mare of Babeş-Bolyai University and the department in Miercurea Ciuc of Sapientia Hungarian University of Transylvania. These campuses care for their own infrastructural conditions necessary for students to fulfill requirements of PE, sponsor sports programs and events, and perform organisational tasks. This is also why it is crucial to treat them as individual institutions and campuses when it comes to the examination of sports options and institutional environment. The sample item numbers of institutions and campuses are shown in Figure 1 below. We can see how most responders are from the main-building campuses and the Faculty of Economics and Business of the University of Debrecen. The number is above 100 in the case of Babeş-Bolyai University in Cluj-Napoca, the former College of Nyiregyhaza, Janos Selye University in Komarno, and Uzhhorod National University, while the lowest item numbers belong to Ferenc Kolcsey Teacher Training Institute of DRTU, the University of Oradea and the Satu Mare department of Babeş-Bolyai University. The latter two also had to be excluded from the analysis.

Figure 1. The sample item numbers included in the research (N=1999)

Source: IESA 2015
In the research, we tested the frequency of practising sports. Students could choose from six options ranging from “never” to “at least three or more times a week”. The factor analysis of pastime sports activities such as cycling, swimming, ball games (e.g., basketball, handball, volleyball, and football), extreme sports, hiking, excursion, games of groups (e.g., cards and bowling) concentrated into separate factors. We turned the frequency of practising into a scale from 0 to 100, where 0 means “never” and 100 means the highest frequency of practising sports. We were also interested in why doing sports can be considered important, which we regard as a kind of motivational factor. By factor analysis we separate two attitudes: the competitive and the health-promoting attitude (Maximum likelihood method, direct oblimin rotation, explained variance: 48.9%, KMO: .770). The values of the factors were also converted into a scale from 0 to 100, where 0 means “not at all” and 100 means “fully”. We also wanted to know why students do not do sports at all or only very little: They could answer with “yes” or “no” or by stating that they were not satisfied with the sports facilities offered by the university. We compared the students with respect to sports done in an organised and institutional manner. We were curious to see the number of members of sports clubs, organisations, and groups. We used an SPSS 24 program package, one-sided variance analysis, and a Chi-squared test.

We tried to understand the patterns of institutional differences in the quantitative results through qualitative methods. In connection with the sports concept, sports options, and infrastructure of the institutions, we conducted interviews with leaders of the institutions and institutes, PE teachers, who are responsible for sports activities and programs of the institutions. As part of this ongoing research, we conducted eight interviews at the University of Debrecen (with three people), the University of Nyiregyhaza (with one person), Ferenc Kolcsey Teacher Training Institute of the DRTU (with one person), Partium Christian University (with one person), the Târgu Secuiesc and Sfântu Gheorghe departments of Babeş-Bolyai University (with the same person), the Mukachevo State University (with one person). We collected online information about the Hungarian Language Teacher Training Faculty of the University of Novi Sad, Janos Selye University, and Constantine the Philosopher University in Nitra. The interviews were made in the spring of 2017. We recorded them on dictaphones and then made written copies. One of the interviewees did not consent to the audio recording, so answers were given in writing. The length of the interviews ranged between 45 and 90 minutes.

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19 See the study of Kovacs (2015b) for the factors made up by the pastime habits.
20 Besides three authors, Szilvia Urbinne Borbely, Katalin Zoller, Emese Berei, and Katalin Pallay also contributed to the making of the interviews. We are greatful for their work.
Results

According to our results, 22.3% of students do not do sports at all; the highest proportion (24.2%) practice sports once or twice a month, 22% do sports with weekly regularity, and 18% are active in sports at least three times a week. The most recurrent sports are the classic ones such as running/jogging, football, cycling, working out, and swimming. Sports are considered important in most cases for the sake of health promotion and mental refreshment (80.4% and 75.3% answered with “yes”). The least important factors are victory, competition, and community (12.6%, 13.1%, and 32% answered with “yes”). The main reason for not doing sports is the lack of time (41.7%), but financial limitations (22% do not have enough money for doing sports), and dissatisfaction with the options offered by the institution (17.8%) also have significant influences. Focusing on the organised form of doing sports, we can see that in total, 19.7% of students are members of a sports club or sports association, and 11% of students are members of a fan club. Running, walking, and cycling are also among the most popular pastime activities: 53% of students go running/walking at least once a week, one-third of them go cycling, and one-fifth of students go hiking or on an excursion at least once a month (Kovacs, 2016).

In the following parts of the research, we focus on our main question: What institutional differences can we discover in sporting habits of students in the examined higher education institutions? First, we compared the institutions based on the frequency of doing sports (figure 2.). We found small but all the more significant differences (p=0.002). We can see that the students at Constantine the Philosopher University in Nitra do sports most regularly (61.07 points); three out of the following four places are occupied by campuses of the University of Debrecen, which can serve as a verification for the sport conceptual aspirations of the university in the past year. The focus of them is the reconstruction of diverse university communities and the revivification of university sports successes through offering more sports options, events, and programs. The third place is occupied by the students of the Mukachevo State University with 60 points. Students from Transylvania and the Partium do sports the least frequently in cities like Cluj-Napoca (BBU, 44.34 points), Oradea (PCU, 44.5 points), and Miercurea Ciuc (49.04 points). We have to point out that the PCU does not have its own sports infrastructure; PE lessons are held in the gymnasium of a high school.

“Unfortunately, we teach PE in a high school in Oradea, which is inconvenient because it is far from the main building of the university. The students have to commute. One class is 45 minutes, and it takes 20 minutes to get there. You can do the math and see how much time we have for physical activity” (PCU, woman).
Analysing the average number of points of pastime sports activities, we can see that the first five places are occupied by the institutions of five different countries (Figure 3.). This form of spending free time is the most characteristic for the students of the college in Berehovo (39.99 points). They are followed by the students of the former agricultural centre of the University of Debrecen (33.4 points), the university in Nitra (32.8 points), Uzhhorod National University, and the Târgu Mureş institution of Sapientia University, both of them with the same amount of points (31.81 points). It might be surprising that the first place is taken by Ferenc Rakoczi II. Transcarpathian Hungarian College, which does not have its own sport infrastructure, and uses only a room, another school, or local sports courts for exercising. Behind this is the fact that to complete their requirements in each semester, students have to take part in at least one extracurricular activity, community, or group activities (e.g., sports club, choir, or science club), which also has to be certified by the leading instructor in a grade book. Sports activities are rather popular; students readily chose them even as pastime activities, thus completing their educational requirements. The campus of the Faculty of Economics and Business of the University of Debrecen does have its own sports centre; numerous courts (running, football), a separate hall, and a fitness park are all provided to cater to the needs of students, and expansions are in progress today. This faculty, like the whole of the university, puts on emphasis communal sports programs and games that have a community-building function besides raising awareness to lead a healthy life. Our interviewee shared the following about the duties of the Sports Office of the University of Debrecen. These duties include:
“...the communication, the marketing part and of course the organisation of pastime sports events, which could be championships or cups. But naturally, starting from our free-admission program, there are many types of entry discounts. We are trying to make sports popular with the students, either in the form of doing sports, as well as in PE lessons or competitive sports, we help a lot of people. We also have our cooperating partners like the handball, football, water polo or ice hockey team of DVSC; we’d like to make sports popular by free or discounted admission...” (The University of Debrecen1, man).

Another interviewee from the University of Debrecen also emphasised the commitment and positive mentality of the leaders toward sports and healthy lifestyles. This view is supported by further plans of the university:

“...in the upcoming years, if we have the opportunity, we’d like to make people aware of how important sports are. It connects us, so it is the only thing where it doesn’t matter whether you’re a policeman, a postman, a railway worker, or a brain surgeon; everybody’s interested in sports. When old friends from primary school meet, they can’t really talk about their jobs because everybody’s doing something different, but they can talk about sports. So we’d like the University of Debrecen to be like American universities in this respect—we want sports to connect the whole of the university, we want to meet all requests. We want this to give the university an identity, while everybody’s doing their own things” (The University of Debrecen2, man).

The lowest scores are obtained by institutions that do not have their own sports infrastructure. The obligatory PE lessons have to be held in the gyms and halls of other institutions, or in small rooms for exercising especially for this purpose: DRTU Ferenc Kolcsey Teacher Training Institute (21.47 points), UD Faculty of Health (21.61 points), PCU (21.61 points). The students of the faculty in Subotica have the lowest number of points (19.1 points). From the results of our previous research (Kovacs, 2016), we could already see that neither socio-cultural nor demographic factors play a role in the frequency of practising sports in the examined higher education institutions by countries, the infrastructural lack of sports options interferes more. An interviewee said the following about the sport infrastructural options of the University of Novi Sad:

“The HLTTF does not have any form of sports infrastructure; there’s no gym, not even a room appropriate for doing any kind of physical activity in the building of the faculty. Although this should change by December 2018, since from the 1.5 million euros we got from the Hungarian state specifically for renovation, we will be able to afford a gym and a diagnostic laboratory. Currently, we are using the gym of Dezső Kosztolányi Talent Managing High School, that is where we have our practical lessons, which is about a 10-minute walk away from the centre of the city and so, from the building too. It’s not the most ideal solution, but we are glad that they could make some room for us there at least” (The University of Novi Sad Hungarian Language Teacher Training Faculty, Subotica, man).
Competing does not seem to be a motivational aspect among the responders, and it is significantly unimportant among the students of the PCU (8.45), the UD FH (9.67) and the university in Nitra (12.78). In this latter case, we can see that the students of the university in Nitra do sports not only the most regularly but also aim towards recreation and an active passing of their free time. Their main motivation is health-promotion—they are second place in terms of health-promoting attitude (81.83). They are followed by the students of the other Slovakian, Janos Selye University (75.41 points).

In our earlier analyses, we saw that Slovakian responders are motivated only by health-promotion, and no other social-demographic factor influences how often a student does sports (Kovacs 2016). This may be the result of Slovakian sports politics putting the main emphasis on recreation, thus trying to utilise their geographic and touristic possibilities. The sports habits of students are highly influenced by the examples they see at home, which may become a natural part of their life by this time. In Slovakia, families consider spending free time in a health-conscious way essential from a very early age. We can often see families with small children skiing and hiking in Slovakia. Pastime sports are in the foreground of public education as well. Students learn skiing and kayaking in class. Janos Selye University aims towards utilizing these advantages and organises four camps annually for its students (e.g., tourism and skiing).

In accordance with our previous results (Figure 1.), practising sports competitively is also important to students of the college in Berehove and those of the campuses of the Faculty of Economics and Business of the UD (33.64 and 26.04 points) (Figure 4.). The faculty in Subotica has the third highest score (23.69), which indicates that those who do sports either do so competitively and do not regard sports as a leisure activity, or they view health promotion as a motivational factor that plays an essential role in their lives (81.89
points). The students of the PCU do not seem to be very interested in competition or health promotion (60.87), but the lowest score belongs to the students of the Faculty of Engineering of the UD (59.32 points). The average number of points is presented in Figure 4 below.

Figure 4. Average score of the competitive and health-promoting attitude toward sports, institution by institution (points on a scale of 0-100, N=1979)

Source IESA 2015

In this section, we look at what differences there are between the students of the institution with respect to their not doing sports at all or less than should do (Table 1). We can find significant differences in the case of four variants. 60%—above average—of the students of the main-building campuses of the UD, which also includes the faculties of medicine and the DRTU Ferenc Kolcsey Teacher Training Institute, with its low number of items, seem to be too busy to do sports regularly. The latter and the students of institutions that have no sports-infrastructure of their own, such as the Faculty of Health of the University of Debrecen or Partium Christian University, have expressed above-average dissatisfaction with the sports option offered by their universities, and this is why they do not do (enough) sports. This can also justify why the students of the BBU reached the lowest score in their frequency of practising sports, as 29.4% of them said "yes" to this question. The case of the university in Nitra is quite unique: Its students are the ones who do sports the most regularly; at the same time, 43.9% of them say that the institution does not offer an adequate number of sports options. It implies that they practise sports individually as a form of pastime activities outside the university, and, as we have already seen, for the sake of recreation and health promotion. The opinion of our interviewee from Nitra:
“As far as sport infrastructure is concerned, it is not too satisfying. I would give a moderate rating to our institution in terms of facilities and equipment. Unfortunately, our university cannot boast with organization of sports and leisure programs. Students can spend their leisure activities by doing sports offered by the colleagues (in their free time) and by using the opportunities in the city. The city’s sports facilities (fitness clubs, bicycle routes ...) are relatively satisfactory, and it is proved by the fact that the City of Nitra got the award of "Sporting City of Europe" in 2018” (Constantine the Philosopher University, Nitra, man).

The situation is similar at Mukachevo State University where the students are in the third place in the frequency of practising sports, although one-third of them are dissatisfied with the sports options offered. The institution has its own recently renovated and well-equipped sports hall which is used together with the College of Pedagogy. Sports groups are available, and the most talented students of each type of sport take part in competition between colleges/universities. This is why we assume that what students are actually dissatisfied with are the types of sports they can choose from and the organisation. According to the interview we made here, the issue becomes multi-dimensional and reveals that sports options cannot be guaranteed any longer because of reduced financial resources:

“Our institution used to rent several sports courts and gyms in Mukachevo. Due to the amount of the rental fees, that is no longer a possibility. Students use the free-for-all sports courts near the university.”

One of the employees of the university paints an even more obscure picture of the future:

“The current financial state of Ukraine does not facilitate the support of PE education at the university. This is one of the main restraints when it comes to development. Our institution is one of the few that still keeps up the obligatory PE education in every faculty, but the ministry is making plans which do not include that, so it is quite likely that PE will be left out of the curriculum. All in all, what we can say is that our faculty will only stay alive until physical education is obligatory” (Mukachevo State University, man).

Few of the students on the three campuses in Debrecen (the main-building, Kassai Road, and the Faculty of Economics and Business) say that there are not enough options for doing sports at the university. Only 8.1% of students are dissatisfied with the options in the city, representing the success of the endeavors of the university, as well as of the city—mostly because of the new Sport Concept—to motivate more and more of the young students to practise sports. The college in Berehove is the one with the highest proportion of dissatisfaction with sports options in the city (26.7%). Berehove barely has any traditions relating to mass sports, and competitive sports have only brought a few successes (e.g., football, handball, and wrestling), but their institutions have deteriorated since the end of communism. Football is the only one rebirthing—the pitches of the stadium have recently been renovated with the help of sponsors, although apart from the teams, everyone else has to pay rental fees. There is only one gym for working out, and the only pool has thermal water, so it is visited by people from all around the country and
from abroad in hopes of recovery. Because of all the tourists, swimming is difficult, and hygiene conditions are not of the best quality.

Supporting a previous test, we have once again learned that the outstandingly bad health conditions of the students of the college in Berehove and Mukachevo State University do not allow them to do sports (regularly) (25.3 and 18.5%). In the study of Keresztenyi and Greba (2016), we see that in Ukraine in the past years more and more students have been completely or to some extent absolved from doing PE. The reasons are some health issues due to the fact that several students complained of feeling unwell, and to the 17 deaths on PE lessons in the last eight years. Only 30% of schoolchildren can practise sports without any limitation, which is concerning since it is obvious that this number only grows in higher education. This situation is made even worse by the fact that these children and adolescents are not able to take part in PE because of their health conditions, so they cannot practise sports at all, and they do not have opportunity for physiotherapy. The Hungarian Language Teacher Training Faculty of Subotica must be happy to know that no more than 1.6% of the students claim they have health problems—a lot lower percentage than could be expected based on an accidental arrangement. Table 1 below demonstrates the proportion of “yes” answers given to the questions described above.

Table 1. Proportion of Those Answering “Yes” When Asked About the Reasons of No or Insufficient Practise of Sports, Institute by Institute (Percentages, N=1979: IESA 2015)

<table>
<thead>
<tr>
<th>Institution</th>
<th>I don't have time for it, I'm too busy</th>
<th>The type of sport I'm interested in is not available at my institution</th>
<th>The type of sport I'm interested in is not available where I live</th>
<th>My health condition doesn't allow me to do sports</th>
</tr>
</thead>
<tbody>
<tr>
<td>UD, main-building campuses and faculties</td>
<td>49</td>
<td>10.3</td>
<td>8.1</td>
<td>8.9</td>
</tr>
<tr>
<td>UD, campuses of the Faculty of Economics and Business</td>
<td>31.2</td>
<td>11.7</td>
<td>12.3</td>
<td>10.7</td>
</tr>
<tr>
<td>UD, campuses on Kassai Road</td>
<td>34.2</td>
<td>6</td>
<td>7.4</td>
<td>10.1</td>
</tr>
<tr>
<td>UD, Faculty of Engineering</td>
<td>40</td>
<td>9.1</td>
<td>12.7</td>
<td>14.5</td>
</tr>
<tr>
<td>UD, Faculty of Health, Nyiregyhaza</td>
<td>41.4</td>
<td>27.1</td>
<td>12.9</td>
<td>7.1</td>
</tr>
<tr>
<td>UD, Faculty of Child and Adult Education, Hajduboszormeny</td>
<td>26.5</td>
<td>23.5</td>
<td>17.6</td>
<td>2.9</td>
</tr>
<tr>
<td>DRTU Ferenc Kóksey Teacher Training Institute</td>
<td>69.6</td>
<td>60.9</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>College of Nyiregyhaza</td>
<td>41.2</td>
<td>16.9</td>
<td>12.5</td>
<td>6.6</td>
</tr>
<tr>
<td>Ferenc Rakoczi II. Transcarpathian Hungarian Institute</td>
<td>48</td>
<td>25.3</td>
<td>26.7</td>
<td>25.3</td>
</tr>
<tr>
<td>Mukachevo State University</td>
<td>51.9</td>
<td>29.6</td>
<td>18.5</td>
<td>18.5</td>
</tr>
<tr>
<td>Uzhhorod National University</td>
<td>32</td>
<td>21.4</td>
<td>13.6</td>
<td>9.7</td>
</tr>
<tr>
<td>Babes-Bolyai University, Cluj-Napoca</td>
<td>48.6</td>
<td>29.4</td>
<td>11</td>
<td>5.1</td>
</tr>
<tr>
<td>Sapientia Hungarian University of Transylvania, Târgu Mureș</td>
<td>31.4</td>
<td>23.5</td>
<td>9.8</td>
<td>5.9</td>
</tr>
<tr>
<td>Sapientia Hungarian University of Transylvania, Miercurea Ciuc</td>
<td>40.5</td>
<td>21.6</td>
<td>6.8</td>
<td>6.8</td>
</tr>
<tr>
<td>Partium Christian University</td>
<td>55</td>
<td>30</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Constantine The Philosopher University in Nitra</td>
<td>40.4</td>
<td>43.9</td>
<td>12.3</td>
<td>7</td>
</tr>
<tr>
<td>Janos Selye University, Komarno</td>
<td>45.2</td>
<td>17.3</td>
<td>17.3</td>
<td>8.7</td>
</tr>
<tr>
<td>University of Novi Sad Hungarian Language Teacher Training Faculty, Subotica</td>
<td>30.2</td>
<td>14.3</td>
<td>15.9</td>
<td>1.6</td>
</tr>
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*The underlined numbers indicate that the result exceeded the expectation; those in bold indicate that the result was below the expectations.
Most of the students—precisely one-third of them—are members of a sports club, group, or organisation in the three Ukrainian and the Târgu Mureș faculty of the Sapientia Hungarian University of Transylvania (Figure 5). In the case of Berehove college, we have already mentioned that the students’ obligation to take part in extracurricular activities or groups heavily influences this proportion. Although it is important to note that in institutions for Hungarians as a minority, such as that of Berehove and the Sapientia, these activities also carry community-forging/community-building as well as identity-preserving meanings. The proportions of the Kassai Road campuses and those of the Faculty of Economics and Business of the UD are above 20%. The lowest proportions, not surprisingly, belong to the institutions where the frequency of doing sports is as just as low (DRTU: 4.5%; PCU: 5.1%; BBU: 13%) or where health-consciousness is the least important to the students (UD FE: 12.8%) (Figure 5). The students of the main-building campuses of the UD reached a score that was lower than expected, which, however, corresponds to their lack of time for doing sports, and even if they do practice sports, few of them opt for an organised type of sport.

Discussion

In our research, we scrutinised the institutional effect influencing students' sports habits in the northern region of the Hungarian Great Plain and outside Hungary’s borders in Slovakian, Ukrainian, Romanian, and Serbian universities where Hungarians are either a minority or majority. The institutional environment does in fact have an impact on the frequency with which students practise sports in the institutions that were part of the research, lack of infrastructure proved to be a restraint (especially in the case of Partium Christian University, DRTU Ferenc Kolcshey Teacher Training Institute, and the University
of Novi Sad Hungarian Language Teacher Training Faculty). Existence of a sporty institutional environment seemed to be a positive influence especially in the Debrecen campuses of the UD, Janos Selye University. In this respect, the sports strategy of the University of Debrecen is remarkable in the sense that it, without a doubt, increases the frequency of students doing sports.

Making sports club memberships as a part of the curriculum requirements is one of the solutions that drives students to spend their free time practising sports (which is the case at Ferenc Rakoczi II. Transcarpathian Hungarian Institute). The other one is the wide range of sports programs.

Health promotion and health-consciousness are definitely the background motivations behind students sports activities. This result is given a special meaning in light of the above-described cases of students who are not able to do physical activities many times due to health issues, principally the students of the Transcarpathian institutions in Berehove and Mukachevo. The reason for not doing sports at all or just occasionally is most definitely students’ lack of time. This could be promoted by a local sports infrastructure or by a wider range of options and better organization in the absence of infrastructure.

The conclusive finding of our research is that the institutional effect obviously influences sports habits of students in higher education. This research has confirmed that an adequate sports infrastructure, a wide range of options, well-organised sport programs, and an institutional sports strategy can increase the amount of students’ sports activities. As of late, many studies have aimed towards the exposure of the added value of institutions. During the course of these studies, the enumeration of previous and parallel effects seems to cause the most difficulties (Pusztai, 2016). In this research, we did not have the chance to address socio-cultural issues that could impact students’ sports habits such as financial situation, gender, where they come from, parents, friends, siblings, whether their partners do sports or not, or necessary elements of social, environmental, individual lifestyles, and communities (Keresztes, 2015; Perenyi, 2011, 2013; Kozma et al., 2014; Gal, 2014; Doczi, 2014; Kovacs, 2015; Kovacs 2016). However we have to emphasise that when looking for the beneficial trajectories of the institutional effect, it is worth tending toward their inherent meanings of impact from the structural perspective of the undoubtedly significant intergenerational connections. According to some assumptions, apart from the structural features of the relational resources of a campus, the nature of communal activities is just as essential. In terms of the subjects of communal activities, we can mention two factors relations built on educational-intellectual activities, and those built on private life or pastime activities (Pusztai 2016). Practising sports in a community has a detectable significance in students’ studies, too. According to the results of our research, in institutions where Hungarians are a minority, especially in the college in Berehove and Sapientia University in Târgu Mureș, sports also have a community-forging/building and identity-preserving role in the first place.
Our study is worthy of further reflections in many aspects: Are the correlations true regardless of regional or gender differences, or what does the social “capital” of parental care mean during the years of higher education? Seemingly, these do not have any connection to the institutional effect, though if we think about it, they do (Pusztai, 2016). Literary sources on the topic talk about a new model of the connection between parents and higher education (Wartman-Savage, 2008). Analyses on the effects of institutional programs in connection with parents regard them not only as donors but also as active partners in the higher educational development of students and a successful start to their lives after the university. Our study points out the power of the positive example of spending free time together in Slovakian families.

Another aspect worthy of research within the analysis of the institutional effect could be whether students do better in their studies, after outsourcing social statuses, if they have a type of relationship with their instructors that is at least worth mentioning. The influence of instructors is usually not constant; with the growth in diversity of students, differences noticed with respect to students' attitudes towards their instructors, that is, who dares or wants to have conversations with the instructors. Students who do not frequent campuses cannot profit from these resources whatsoever (Pusztai, 2011). Our interviewees often mentioned that their instructors at the institutions were keen practitioners of physical activities. So how much influence does this fact have on students to reshape their sports habits?

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**Documents**


The Relationship between Motor Activity and Health through the Perception of Competence

Ferdinando Cereda

Abstract

A regular physical activity and its involvement into everyday life have always been very important issues, frequent topics of interest in scientific literature, and mainly referred to adolescents and children. The positive social psychological effects of a regular physical activity, on the short and long run, are well established, but they have not yet provided us with any significant reasons why physical activity usually declines at a certain age. Research has shown that a constant physical activity gives general wellbeing and prevents from many diseases; nevertheless, it has also been shown that the practice of physical activity usually decreases significantly during adolescence. Increasing the quality of everyday life means a careful attention to the relationship among our environment, the individual himself, and the physical activity that is being performed. In this perspective, it is necessary to consider the individuals’ health perception, the behaviour related to this perception, and the relevant consequences of this. As an indicator of wellbeing, self-esteem becomes crucial, both for evaluative and educational purposes, and for strengthening the feeling of “control”. The aim of this paper is to carry on research among the relationship between regular physical activity and its benefits, towards physical and mental health, to verify the effectiveness of interventions.

Keywords: motor skills, self-esteem, lifestyle, health promotion, perception of competence
Introduction

Promoting people’s health means increasing their quality of life, paying particular attention to the factors health is including; physical activity is one of these factors, and the benefits derived from it, lead to an active lifestyle (Garber et al., 2011, CDC 1997, 2011).

Until now, the link between the regular physical activity of moderate intensity and the benefits regarding physical and mental health, is a given fact (Sallis, 1994; Biddle and Mutrie, 1991; Fox, 1997), but, on the other hand, the contributions of vigorous physical activity should still be defined and, above all, the different contribution of sport and motor activity. Furthermore, the factors and mechanisms (personal, environmental and social one) included within the relation and the casualty of the relation itself should be better determined (Giles-Corti & Donovan, 2002).

In fact, although the value of physical activity is widely recognized, most people maintain a sedentary lifestyle and are reluctant to change, and for this reason it is now urgent to establish the most effective strategies for preventing discomfort and promoting health (Biddle et al., 1991; Prochaska and Velicer, 1997). The biggest problem, which turns much of the current research, is the use of appropriate measuring instruments regarding the effectiveness of physical activity on health (NCHS, 2016).

Epidemiological studies show that more active people are less at risk than a number of chronic discomforts, including cardiovascular disorders, diabetes, hypertension, osteoporosis, obesity, colon and prostate cancer, anxiety and depression. Additionally, when both regular physical activity and physical fitness are poor, the risk of mortality increases significantly (CDC, 1997, 2011).

Although the urgency of the problem concerns more women than men, data show that age is inversely proportional to the amount of time dedicated to physical activity and that even an education and a precarious socioeconomic state have a negative impact on the use of leisure time (CDC, 1997, 2011).

Thus, the promotion of a better lifestyle implies the full consideration of the person for whom we not only have to consider the care of all individual’s levels (cognitive, affective, motoric and behavioural), but also the understanding of environmental variables and their respective role. In addition, adhering to adequate physical activity in adolescent and pre-adolescent age, means creating the premise for this to occur in adulthood.

Today in order to understand where experimental investigations are moving to, it should be emphasized that although, in practice, the starting, retention and resumption of physical activity are distinct conditions, they depend on the different combination of these factors (eg self-confidence, goal setting, self-reinforcement, environmental barriers, fun, family, and friends), and it is clear that in the future, it will be necessary to devote much of the research to deepening the mechanisms outlined above.
Among the events and activities that promote physical activity levels, Sallis (2008) have proposed an ecological approach that identifies, among the major influences, intrapersonal factors (demographic, biological, cognitive/affective, behavioural), socio-environmental factors (supporting behaviour, socio-cultural climate, social policy incentives, resource for activity / inactivity) and physical and environmental factors (natural and artificial).

Trost (2002) and Kain (2017) ranked the factors associated with physical activity in six groups, specifying the importance of each role in promoting the activity:

1) demographic and biological aspects;
2) psychological, cognitive and emotional aspects;
3) ability and skills;
4) socio-cultural aspects;
5) environmental aspects;
6) features concerning one’s own physical activity.

Factors Relating to an Active Life Style: from the acquisition of skills to the perception of competence

The voluntary movement implies a close synergy among different areas (cognitive, motor and affective), and personal awareness, from neuro-muscular, physiological, mental and social side, ensures the effective and comprehensive use of all these components. The urgency of improving educational interventions, because the movement becomes a habit in the lifestyle of the individual, is the direct consequence of the intrinsic value that assumes the movement itself, if one considers it like the most obvious expression of ideals, leading to ethical and aesthetic side. Until today, interest in physical activity has produced various attempts to theorize different learning strategies within explicit educational approaches, in order to promote a proper development of the psychomotor behaviour of the individual. Increasing motor activity means intensifying individual perceptual development; in fact, if past experiences are a prerequisite for successive acquisitions, it is without doubt very important the educational value of an effective use of one’s body and the progressive development of perceptual abilities. In these terms, the learning and construction of simple and then complex motor skills, become a primary objective in the evolutionary field (Bertollo, 2004). On the other hand, such a principle implies the most recent sense of motor intelligence, so the proper use of one’s body guarantees, at the same time, a steady state of health, the development of motor skills necessary for relationships, and better usage of motor skills (Bertollo, 2004). Apart from being a prerequisite for human existence, movement is an integral part of it, for which it envisages the creation of multifactorial explanatory constructs which can define circular dynamic processes. Now, in fact, the psychomotor area includes educational goals that are apparently distinct, but which demonstrate, during their development, a strong integration, for example the evolution of motor and cognitive skills on the one hand, and the self-concept, on the other. In other words, the evolution of learning and motor control promote the perception of
competence and, subsequently, control, so it defines considerably the integral formation of the individual.

**From Self-Perception to Self-esteem**

It is almost unquestionable that physical activity improves self-perception (Sonstroem, 1989; Cohen, 2015). Today, experimental researches have repeatedly verified, in relation to all possible age groups, changes, more or less evident, in Self’s perception (Fox, 2000; Sales, 2017). Mental health indicators are independently and directly associated with positive changes of physical self, then with variations related to the various components of physical self-perception (for example body image, physical form and perceived strength). Self-esteem, which is included among the indicators of mental health, is the most significant factor regarding wellbeing perception. The self-esteem level increases with self-perception and it has been shown that people with a reduced initial self-esteem, through physical activity are getting higher outcomes than others with a high self-esteem (per example: people with learning difficulties, depressed women, delinquents, obese men, alcoholics). Sonstroem (1997) argues that experience can change positively and negatively the self-esteem, by promoting the evolution of skills, control of gesture, achievement of success, and so on. A confirmation to these studies comes from the correspondence between high personal self-esteem and specific aspects such as independence, leadership, stress adaptation and resilience, and others equally considered crucial: the ability to choose and succeed, the tendency to persist to general behaviours related to health. On the contrary, the onset of mental illness or disorder (depression, anxiety, and phobias) is common in people with low self-esteem. In particular, the relationship between performance and perceived self-efficacy is significant, considering the latter as conviction in one’s ability to organize and carry out the course of actions, necessary to adequately manage the situations we are going to meet, in order to reach the predetermined results (Bandura, 1997). The research about the perceived self-efficacy, allows you to use your personal resources to promote well-being, so the individual’s success. In particular, the belief acting in hardworking and effective way has important effects on various aspects of health, such as coping skills. Self-esteem is a global construct and it is based on a hierarchical multidimensional structure, including perception of Self, physical, social and scholarly Self, otherwise differentiated, compared to other dimensions: familiar, environmental, interpersonal, scholastic, emotional and bodily. The physical Self includes in particular, as conceived by Harter (1988), appearance and skills. Given that body is the interface between the individual and the environment, by considering the different dimensions of the physical Self (body image, sporting competence, perception of physical fitness, physical health), there is a strong correlation with Self-esteem (Marsh, 1997). Over the last decade, the evolution of measuring instruments has progressively shifted to the concept of multidimensionality matured on the theoretical level, considering the opportunity to evaluate separately the various aspects of the different domains of competence. Rosenberg (1965) evaluated Self value through the Global Self Esteem Scale, Harter (1985) and Marsh (1988) subsequently built
two more specific evaluation tools, respectively Self-Perception Profile and Self-Description Questionnaire, and Fox and Corbin (1989), finally, developed the Physical Self-Perception Profile (PSPP) for adults, by extrapolating four sub-domains, related to the value of the physical Self: competence, physical appearance, perceived strength, and physical condition. Whitehead has contributed, adapting the same instrument to children (Whitehead and Corbin, 2000). Similar surveys are used to investigate how exercise affects the different aspects of self-perception and how they affect self-esteem, for example: adhesion to physical activity increases positive feelings towards physical conditions, that, in this way, affect the value of physical self and self-esteem (Bertollo & Pellizzari, 2001). According to last researches, it is interesting that there is no direct relationship in the growth of physical fitness and self-esteem; positive self-perception is, in fact, is associated with the perception of physical fitness improvement and / or other factors, rather than with their actual change (Fox, 2000). Indeed, however the self-esteem change corresponds with psycho-physical and psycho-biochemical effects, physiological and physical changes have no direct relationship with changes in self-perception (Bertollo et al., 2003). In other words, it has been shown that the perceived welfare evaluation escapes the measurement of real conditions, resulting more from sensations the individual reports. To overcome such a disadvantage, you could point to a better understanding of psycho-social mechanisms, involved in physical activity (perception of competence, perception of appearance, autonomy and body control, sense of belonging and self-acceptance), even though the same mechanisms make the issue extremely complex.. Despite the instrumental limitations that have just been mentioned, it can be stated that (Fox, 2000):

- 78% of the studies showed significant changes compared to the ability to promote different perceptions of the physical ego (eg body image);
- self-esteem improvement is not an automatic result of the exercise programs, although it can be done with some exercises and some people;
- both men and women experience positive effects;
- effects are likely to be more apparent for those with low initial values;
- different exercises change self-perception, but aerobic exercises and workout weights are the most appropriate, with particular reference to short terms effects.

**Promotion of Physical Activity: from theory to practice**

Parallel to the definition of physiological determinants related to physical activity, in order to promote change in people inclined to a sedentary lifestyle, it is necessary to deepen the use of psychological theories and specific behavioural interventions. Many scientific evidences point out the benefits of an active lifestyle and confirm the risks of a sedentary life often associated with a poor lifestyle, real disabilities and weak life expectancy. The advice given to sedentary adults is to accumulate at least thirty minutes of physical activity at moderate intensity over many, preferably all, days of the week. This means that intermittent activity can provide substantial benefits, regardless of the type of
activity you choose (cycling, dancing, gardening, playing with children, doing homework) provided the recommended intensity is maintained, corresponding to a frequency heart rate ranging from 60 to 90%. Children and teenagers, on the other hand, should accumulate at least sixty minutes each day of the week, between moderate physical activity and vigorous physical activity, even in this case intermittent physical activity proves to be valid, vice versa, a prolonged vigorous activity is deleterious. Now it is clear that the benefits of physical activity are not limited to adults and that regular presence in childhood and adolescence helps build and maintain healthy joints, bones and muscles, helps control weight by building lean mass and reducing fat; prevents and delay the development of high blood pressure and helps reduce blood pressure in some adolescent with hypertension; reduces the feelings of anxiety and depression.

A direct and significant relationship between physical activity and a better school performance is also expected nowadays, since students have significant effects on mental health and on learning abilities. On the other hand, it is now clear that participation in physical activity increases self-esteem for teenagers and reduces anxiety and stress. Still, physical activity can promote social well-being, it has been demonstrated that students, practicing sports are less likely to use drugs and violence, attend the school environment by behaving properly and achieve good results. The following six parameters have been highlighted among the possible measurement indexes for health, related to quality of life (HRQL):

1. global indexes: general satisfaction, self-esteem;
2. physical functions: perception of functioning, physical self-perception and perception of health;
3. physical symptoms: fatigue, energy and sleep;
4. emotional functions: depression, anxiety, mood, emotions and affect;
5. social functions: social dependence, family roles and work;
6. cognitive functions: memory, attention and problem solving.

The main benefits of physical activity are: reducing the risk of developing heart disease, hypertension and diabetes, reducing colon cancer risk, healthier and stronger bones, less colds and flu, better body weight control, increased energy, better sleep quality, decreased anxiety and depression, increased self-esteem (Garber et al., 2011, CDC, 1997, 2011). The most appropriate intervention models should include: examining of individual motivation for change; study of individual and social barriers, interposing to change; calculation of the benefits that will result in changing individual habits; study of appropriate techniques and strategies to first promote and then support the change.

Recent theoretical models (Health Belief Model, Theory of Reasoned Action) and descriptive researches have shown that health-related behaviours are negatively influenced by socio-environmental barriers on which age does not seem to affect, rather, it was revealed that girls report a heightened perception than boys. In the future, among children and adults, should be reasoned the relationship between perception of benefits
and / or barriers, physical activity related to leisure time (Physical and Sport Activity
PSA), and that including a more spontaneous activity (Moderate to vigorous physical
activity, MVPA). Current assumptions indicate that ties are transmitted by parents to their
children and that barriers are more perceived by females. Having to do more research to
discriminate between sex and age, a further effort should be done to improve the
definition of physical activity itself. In order to increase the diffusion of a healthy lifestyle,
it is first of all necessary to redefine the descriptive terms of the activity, and then
encourage positive beliefs towards the benefits to health. Till now, the most prominent
approaches are the Prochaska and DiClemente model (1986) (POC), the model of a natural
history of exercise (Sallis and Hovell, 1990), and finally the Dishman model ("lifespan
interaction model"). The first, called transteoretical, involves five stages of internal
change to a circular progression, the second analyzes the possible factors of the various
evolutionary moments of which physical activity is composed and the third synthesizes
the previous ones. Now it is clear that only multivariate theories and models can easily
investigate the complexity of factors that make up physical activity. In fact, while the
differences between practitioners and non-practitioners were initially deepened, as if
exercise was a "all or nothing" phenomenon, over time it was understood that it is a
dynamic process whose changes need to be structured so that they can be maintained
over time. The Prochaska and DiClemente model is among the most reliable and it has
produced several results at an application level and so it will be discussed here below. It
considers the motivation to change, its related behaviours, and personal and
environmental factors influencing personal motivation. The five above mentioned levels
are the following:

1. those who are inactive and are thinking about anything to become more
active - there are no thoughts of change (pre-contemplation);
2. those who are inactive but are thinking about becoming more active
-thoughts of change (contemplation);
3. those who usually do some physical activity and like to become more active
(preparation);
4. those who do enough physical activity, but have been practicing for less
than six months and may maintain or lose this level of physical activity
(action);
5. those who have usually been practicing physical activity as a habit for six
months or more (maintenance).

The transition from one phase of change to another implies cognitive strategies and
techniques (thoughts, attitudes, awareness) and / or behaviour (action). On one side,
knowledge, risks awareness, attention to the consequences for others, understanding of
health benefits and opportunities are important, on the other side, alternatives, social
support, rewards, and self-confidence are crucial. The model of Sallis and Hovell, on the
other hand, specifies the transitions among exercise phases: from sedentary behaviour to
the adoption of exercise; from the adoption of exercise to retention or drop-out; from
drop-out to restarting. It is a functional model for its simplicity, it denotes physical activity in a dichotomous manner and, consequently, neglects sporadic activity and the one in the evolutionary age. Keeping exercise is a function of feelings of well-being and fun, but researches show that the adverse effects of a vigorous exercise are evident and immediate, while the benefits (health improvement and weight loss) are less evident and are late to arrive. Within the promotion, current research considers the time perspective a significant discriminant. Recent studies have shown that the effects of an intervention aimed at promoting health-related behaviours, can be further enhanced by the long-term perspective of participants. This confirms the causal association between behaviour and time perspective and points out that long-term thinkers have more protection behaviours and less harmful behaviours than short-term ones. Despite the long-term benefits of regular physical activity, many people start it, but have difficulty remaining constant, in fact, as a percentage, drop-out is the rule and not the exception. The problem is that benefits are coming only when people faithfully respect the programs, those who have been training vigorously for a limited time, without giving continuity to practice, do not enjoy the same benefits as those who continue over the years. One plausible explanation is that when people decide to take a certain behaviour, short-term costs associated with regular activity are more likely to benefit long-term benefits. In other words, to change the behaviour of the individual and, in particular, his lifestyle, it is useful to reorganize his beliefs by changing his temporal focus. Besides highlighting the various benefits of regular activity and/or the negative effects of sedentary life, it is necessary to increase the psychological connections that bind the individual way of behaving towards future outcomes. Interventions to increase physical activity among adolescents include more complete psycho-educational approaches than the past, besides the information side, to increase awareness, compared to long-term benefits, different modalities are proposed to improve connections between present behaviours and future outcomes.

**Physical Activity as part of the Ecological Approach**

Working on an ecological approach means operating measurements and evaluations at multiple levels, and not just one. The ecological model helps to understand factors affecting behavior and also provides guidance for developing successful programs through social environments. Ecological models emphasize multiple levels of influence (such as individual, interpersonal, organizational, community and public policy) and the idea that behaviors both shape and are shaped by the social environment. The principles of ecological models are consistent with social cognitive theory concepts which suggest that creating an environment conducive to change is important to making it easier to adopt healthy behaviors. Few researches have been carried out on how ecological models could be specifically applied to physical activity. Ecological models include intra- and extra-individual factors and they determine that everyone has relevance over individual physical activity. Traditional promotion attitudes are based on individual approaches, but they give limited and brief results. Individuals usually resume a sedentary lifestyle before this approach is over. The ecological model, on the contrary, has widened the focus of
attention, adding the individual aspects to socio-environmental ones, capable of facilitating or inhibiting people’s behaviour. By confirming the multi-component nature of the approach in question and the interdependence between intra- and extra-individual factors, it is possible to act at any level to obtain overall changes, internal to the transactions between the individual and the environment. The complexity of the ecological paradigm implies the adequacy of a longitudinal perspective, aimed at framing relationships among various factors. The dynamism and the unpredictability of the same factors make, in this sense, difficult a linear prediction in the performance of these relationships. Welk (1999) has structured a model to approach theory to practice, Youth Physical Activity Promotion (YPAP), and he has, in this way, created a guide to increase promotion programs for physical activity, by analysing the influence of individuals factors regarding the participation of young people to physical activity. At a cognitive level, Welk emphasized the difference between perception of competence and self-efficacy on one hand, and fun, skills and beliefs on the other. The following hypotheses, included in the ecological model, will serve as guides for further confirmations, so to translate theory into corresponding forms of intervention:

1. proximal factors can remedy the influence of distal processes in physical activity  
2. the environment directly affects physical activity  
3. psychological factors mediate most of relationships between extra-individual factors and physical activity  
4. genetic and biological factors influence participation in physical activity  
5. the genetic and biological factors influence on physical activity are moderated by extra-individual factors, such as physical-environmental aspects.

Educate Adolescents to the Perception of Wellness

In education, to ensure the formation of the individual that has long-term effects over an active lifestyle, it is necessary to promote the acquisition of more precise knowledge and motor skills. Research shows that 10 to 14 year old boys, in particular, should gradually improve their understanding of physical fitness components, their evolution, their maintenance, and the importance they take on the whole (NASPE, 1998). To encourage students to take an active lifestyle, learning the concepts of physical fitness is crucial; despite researches have shown that teaching physical education allows all students to learn such concepts, few researches have deepened boys conceptions. Most studies show that students have lack of knowledge and, sometimes, they have alternative concepts that are still to be investigated (Placek, 2001). Furthermore, it is necessary to understand the importance of some aspects rather than others and the reason for this attribution. At present, it is not always clear whether young people are really familiar with the aspects they refer to and the functional activities to their improvement; as they generally know different exercises, many youngsters do not know the goals to run them. Therefore, in the methodological-didactic branch, it is necessary to create the optimal conditions for
adolescents to acquire the ability to draw and run a fitness program, by reconciling declarative knowledge with the procedural one, that are, for some researchers, one the prerequisite of the other. Physical education will then have, as starting point, the development of motor skills and abilities, rather than knowledge which will be placed following the experiencing (Bertollo, 2004). Therefore, if the boy has the necessary motor skills and there are no problems in the execution phase, it is a duty to re-evaluate the choice of the most suitable physical activity (Placek, 2001).

**Conclusions**

In recent years, thanks to the experimental results, it was possible to define the first prescriptions to improve the quality of life. Although the benefits of an active lifestyle have a considerable number of consents, some implicit aspects, in the relationship between the same benefits and physical activity, still need to be established. In the future, research should deepen the relationship between actual physical fitness change and subjective perception of health, and in defining it, it will be necessary to better specify the implicit differences among the different age groups. In addition, to help the effectiveness of educational interventions, it will be useful to evaluate whether it is actually possible to educate both the increase in physical fitness and the perception of the same increase. By safeguarding the quality of life and the well-being of people, the proper measurement of each individual factor (especially: skill, ability, competence, mastery) becomes a fundamental step, as well as the possibility of evaluating individual perception through specific instruments. Therefore, the direction in which research will be addressed will recognize the evaluation aspect as a priority, considering the need to determine which factors could be changed. Improving educational strategies to increase these factors mean consolidating relationships, the same relationships that, if their ecological approach will be confirmed, they could be valuable assumptions in the field of health prevention and promotion.

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The Implementation of Everyday Physical Education in Hungary

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Abstract

The aim of our study is to investigate the progress of the implementation of everyday physical education introduced in Hungary in September 2012 and the investigation of the aims determined in the National Syllabus through the opinion of the participants of Physical Education (PE teachers, students) and non-PE teachers in primary education. The national literature draws the attention to the importance of regular physical activity repeatedly which has several positive physical effects (Piko & Keresztes, 2007; Hejjas, 2006). The implementation of everyday physical education is a significant milestone regarding the physical education. In case of the successful accomplishment of the aims; students' regular physical activity can become even more favourable (Mikulan, 2013). The data collection with our self-edited questionnaire contained 463 teachers (318 non-PE teachers and 145 teachers) and 1153 students (5th-8th grade) from 15 schools of the North-Great-Plain region. The aims and tasks determined in the National Syllabus 2012 and the framework curriculum concerning it was measured on the basis of the opinions of the three groups. Students are the biggest recipients and they agree with the aims similarly to PE teachers. However, non-PE teachers are rather critical of the aims and tasks. In case of city schools, students do more sport, they are more health-conscious, the atmosphere of the lessons is better and the community spirit improved as well. We suppose that our results contribute to the measurement of the changing values of physical culture and sample, moreover it can provide a practical support to formulate the following tasks of the education on health-conscious behaviour.

Keywords: everyday physical education, educators, students

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Introduction

Regarding the physical, psychological and mental health of the children, the regularity, the quantitatively and qualitatively appropriate physical activity has an indispensable importance (Csanyi & Revesz, 2015). However, the Hungarian youth do not do enough sport (Nemeth & Kolto, 2014; Karsai et al, 2013; Perenyi, 2014; Kovacs, 2012) and the physical activity of adolescents is not satisfying regarding their health (Barabas & Nagy, 2012). Moreover, the researches apply negative characteristics to describe the Hungarian population regarding sport (Gal, 2008). In addition, it can be seen according to the analyses of the OECD surveys that Hungarian people consider their health status poor (Balogh, 2015). Besides the family, education can significantly affect the health-improving aims through sport regarding the socialisation areas (Bognar et al, 2005). At school, Physical Education and sport art engraves the basis of the values of physical education into the developing personality in several ways (during lessons, extra-curricular trainings, Physical Education projects, recreational sport activities, depending on the embeddedness of physical education and sport into the current school) in a targeted way on one hand and indirectly on the other hand (Retsagi, 2015).

The Relevance of the Topic and its Literature Background

The baseline scenario is the independent incorporation of the three-fold effect of the physical education into the global culture (Figure 1). The physical culture is one of the most important key terms of the sport science. Principally, we agree with the definition of Pal Hamar (2008): “physical culture is part of the universal culture; it contains one part of the individual’s health culture and its sport culture. Substantively, physical culture is the sum of mental and financial values which has been created and preserved during the development of the human society with the support of the action and physical activity of the society. This activity of the individual happens for the preservation of its physical status and skills, for the development of its physical skills and performance with the application of physical exercises and sport as instruments” (Hamar 2008:6).

In Figure 1, it is visible that its sources are in continuous interactions. The weakest point of the system describes the whole system comparing it to the European nations with more developed health-awareness; we have to decrease the cultural delay, which educates our generations the concept of healthier humans having better lives. Thus the next generation can get the real chance to be healthier and fit during the whole life, their performance can increase and their quality of life can improve as well.
The conceptual basis of our study was provided by implementational investigations (Fazekas & Halasz, 2012) and by the investigations of curriculum concepts (Hamar & Petrovic, 2008; Hardman & Marshall, 2009; Hamar, 2012; Retsagi, 2014; Retsagi & Csanyi, 2014).

According to Fazekas (2012), implementation in a broad sense is a process in which a suggested model or approach is introduced into the practical application. However, in a narrow perspective, it is a changing progress containing initialisation, the implementation, the sustainment and the result. Regarding the determination of the term implementation, Fazekas applies the narrow definition of Fullan and Stiegelbauer (1991) in its studies and we accept this definition as well. On this basis, implementation means all of the exercises which contain the central, regional and institutional arrangements and developments, furthermore, which make them suitable for the central aims with their adaptation to their environment as well. Researches about implementation are seeking answer on how the aims can be reached and not for the question what the current aims are. They do not care about the decision but they explore the progress.

Having a look at participants and interest groups of the interventions in public education (actors, agents, stakeholders), we have to think of the inner participants of the school (leaders, educationalists, other colleagues), of the users of the school (parents, students), and of the leaders of the development (government administration, local leading). The representatives of the organisations supporting the development of the education sector (pedagogical services, consultants) can be mentioned here as well, who can have a significant effect on the implementation of the interventions. Measuring the levels of the implementation, we can state that macro level is marked with the comprehensive level of the society (the role of health-awareness in educational progress in this case) while the
micro level is marked with the individuals (namely students, educators who are investigated). Progresses happening at these levels determine the success of implementation (Fazekas & Halasz, 2012).

The first National Syllabus was accepted by the Government on 5 October 1995 which has changed several times since then. Several researchers (Retsagi et al., 2011, 2014; Hamar-Derzsy 2002a; 2002b, Hamar, 2012) have investigated the different national curricula (1995–NAT1, 2003-NAT2, 2007-NAT3, 2012-NAT4), alongside the alterations of public education and the educational law, highlighting the modifications of the content in the field of physical education and sport. The latest National Syllabus was accepted by the Hungarian Government on the basis of the 110/2012 (VI. 4.) Government Regulation on 4 June 2012. In this, physical and mental health education is determined as a concrete aim. The shift in the education policy has had a mostly favourable effect on the field of Physical education and sport particularly because of the introduction of everyday physical education. § 27 of the law requires the organisation of everyday physical education mandatory for full-time education students which means five lessons per week. From the school year 2012/2013, everyday physical education is mandatory on the 1st, 5th and 9th years, after that it will be implemented gradually grade by grade. In the school year 2015/2016, the introduction of everyday physical education became complete. It was determined too that the students should have the claim for appropriate nutrition, sport and healthy lifestyle. Proficiency in game and sport culture and the claim for developing a healthy, health-centred system is necessary for the implementation of the principles and aims. This field including school Physical Education has outstanding aims, which are are the following: knowledge of the sport, development and enlargement of the sport skills, participation in leisure-time and sport competitions, regular physical activity and the formation of the values of the healthy lifestyle. Analysing the four aim systems of the National Syllabus, it can be stated that it assumes from the required general values and principles (key competences) which underline the whole document thus their validation in the system is the main point. Physical education always had an outstanding role in the field of health education. However, the subject has got a new dimension with the implementation of the everyday physical education which can create a new quality as the conceived aims enable the educators of this field experience to more efficient health education and the creation of the bases of the health culture (Retsagi, 2014). According to the National Syllabus 2012, the outstanding aim of the field of Physical education is that sport should have a serious role in the life of every student, socialising them on a lifelong, health-conscious and active lifestyle (Makszin, 2014). In this process, educators, especially physical education teachers have a serious role, effect (Nagy et al, 2016), hereinafter we investigate them.

**The Role of PE Teachers and the Assessment of the PE Subject**

In the nineties, researches claim that the quality of the educator’s work is significant regarding school effects (Andorka & Simkus, 1983). Trencsenyi already stated in 1988 that physical education teachers have an important support role, despite the fact that they
evaluate their prestige lower than the desired level in the teaching staff according to Elbertné (1987).

The role of the PE teachers is to have an impact on children’s personal development through sport with which the whole behaviour repertoire can be influenced. Their challenge is to make the abilities under inhibition outcrop and to support coping with successes and failures (Csepela, 2000). This is relevant when Kocsis (2000) showed in its research that students assess physical education subject as one of the most favourite subjects. The results of Papacharisis (2003) showed that the negative attitudes toward PE in childhood have a huge impact on physical activity not only in childhood but in adulthood as well. The most important determinant of the PE subject is the representation of values and interests in the local curriculum as the educators have to have the ability to represent their interests with which the outstanding role of the sport can appear in the school documentary as well (Retsagi & H. Ekler, 2004).

According to Huszar and Bognár (2006), Hungarian adults, looking back onto their own lives, consider the effect of physical education on their past and present life significant. The empirical study of Bognár and Kovács (2007) states that the vast majority of upper secondary students believe that the PE subject is particularly important at school. Neulinger (2007) made investigations as well. It can be seen from her results that 60% of the participants liked PE lesson but 22% of them remember negative experiences. 66% of the participants liked PE teachers but 13% did not like them. Versics et al (2009) investigated the opinion of students related to PE lessons and stated that 92% of them marked its importance while 69% of them marked its appreciation. However, only 29% of the students think that the time taken for sport and exercise is appropriate (in 2009 thus before the implementation of everyday physical education) and it is worth spending more time on this activity according to their opinion.

**The Aim of the Study, our Research Questions and Hypotheses**

In the progress of everyday physical education, the result of the effect and efficacy predominates through the work of the teachers. Its assessment must be evaluated from the perspective of the actors of the progress. For this, the investigation of the opinion of the actors participating in the implementation process namely the opinion of the educators and students can serve as the appropriate basis (Fullan, 2015, Fazekas, 2012). Our aim is to recognise the implementation of the curriculum according to the opinion of the investigated actors.

For this reason, the research questions and hypotheses of our study were formulated alongside two questions which are based on the modification of the National Curriculum in 2012 (NAT2012). Our questions tended to measure the possible differences between the opinion of the actors of the progress (namely the educators, more precisely PE teachers and non-PE teachers, and the students) regarding the aims and tasks of the National Curriculum and the framework curricula. On the basis of the previous
researches, we hypothesised that the realisation rates are higher among PE teachers (Elbert, 2010; Imre & Nagy, 2003; Gombocz, 1999), in comparison with students and non-PE teachers. As a second research question, we measured the possible intergroup correlations between the answers of the students and educators of the same institutions. We supposed that a strong connection can be seen between the answers of the educators and the students of the same institution, furthermore we hypothesise that a more tolerant attitude can be experienced in the schools in smaller settlements compared to those in big cities (Borbely, 2015).

Our Hypotheses

H1: We hypothesize that the attitudes of the participants of physical education (PE teacher, student) toward the accomplishment of the aims of the National Syllabus 2012 are significantly better compared to non-PE teachers, furthermore, regarding students and PE teachers, the results of the PE teachers will be more outstanding.

H2: We hypothesize that a stronger relationship can be detected between the attitudes of the educators and students of the same institutions compared to the general attitudes, furthermore, a more tolerant attitude could be experienced in the schools in smaller settlements compared to those in big cities.

The Empirical Investigation

The Introduction of the Sample and its Description

The sample represents teachers (more precisely PE and non-PE teachers) and students of elementary schools of the three counties of the North Great Plain (Szalocs-Szatmar-Bereg county, Hajdu-Bihar county and Jasz-Nagy kun-Szolnok county). The selection of the institutions, students and teachers happened with multi-stage, stratified sampling, the likelihood of taking part in the sample was made with PPS, with a scale method which meant that the ratio of the educators and the students in the institutions was equal. According to this, the likelihood of taking part in the sample was known (and almost equal) thus the sample could be regarded as a probability sample at the institutional level. The sample is a multi-stage, stratified sample in which firstly the county-level ratios were explored with regard how many questionnaires should be distributed in the three counties proportionally. In the second step of the sampling, the counties were divided into three groups according to the size of the settlement, and the concrete number of the selected settlements was determined according to this categorisation. At this level, settlements were categorised not according to the classic categorisation of the size or type of the settlements (city, village and population) but according to the number of the schools of the settlements. In the last step, simple random sampling was used to select the schools in the different settlements, and every educator and upper-primary school student was assigned to the selected schools. On the basis of the applied aspects, the sample can be considered a representative sample for the North-Great Plain region.
At the end of data collection, 463 questionnaires of the educators (318 non-PE teacher and 145 PE teachers) and 1153 questionnaires of students (5-8 classes) were collected from 15 schools.

<table>
<thead>
<tr>
<th>County</th>
<th>Settlement</th>
<th>Educators</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jász-Nagykun-Szolnok</td>
<td>Szolnok_1</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Zagyvarekas</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Szolnok_2</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Karcag</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Tiszaföldvár</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>Szabolcs-Szatmári-Bereg</td>
<td>Mandok</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Nyiregyhaza_1</td>
<td>15</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Nyiregyhaza_2</td>
<td>11</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Senyo</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Gesztered</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Kekse</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>59</td>
<td>149</td>
</tr>
<tr>
<td>Hajdú-Bihar</td>
<td>Vamospercs</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Debrecen_1</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Debrecen_2</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Bocskaikert</td>
<td>12</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>42</td>
<td>124</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>463</td>
<td>1153</td>
</tr>
</tbody>
</table>

**Material and Method**

To measure the attitudes of the educators, a block with 22 questions was elaborated on the basis of a self-made educator questionnaire of Borbely (2016). The attitudes of the students were measured with a self-prepared block of a questionnaire of Fintor (2016) comprising 28 questions. In both questionnaires, the statements suit the aims and task of physical education as well as sport art formulated in the National Syllabus 2012. In this line, it was asked how students and teachers assess the PE lessons in their own school, how they see the described aims, how true for them the mentioned statements are for them. For our analysis, we compared the same blocks of the two questionnaires thus 11 questions were applied, which refer to the same aim and task regarding both groups. These are the following: 'Students started to play sport out of the PE lessons.'; 'The relationship between PE teachers and students became better.'; 'The expectations of the PE teacher in the lesson became higher.'; 'The students become significantly more skillful due to PE lessons.'; 'There is more time to play in PE lessons.'; 'Students can recognise more ways of movement and more kind of sport.'; 'Students became more health-conscious; Students take bigger care of nutrition.'; 'Students are significantly more tired due to PE lessons.'; 'Lessons have a better atmosphere.'; 'The community spirit was improved in the lessons.'.

A four-point Likert-scale (‘Not true at all’, ‘Rather not true’, ‘Rather true’, ‘Absolutely true’) was used. During the analysis, these category variables were transformed into continuous
variables which could lead to a more complex statistical analysis. Thus, variance and cluster analyses were made besides the statistical analyses.

Results

In the first hypothesis of our study, we are searching the answer for the question whether significant differences can be detected in the attitudes between educators more specifically PE teachers and non-PE teachers and students (Table 2). With variance analysis, we explore the implementational progress in which the aims of everyday physical education and sport art determined in the National Syllabus and framework curricula (as independent variables) appear in the PE lessons. In our analysis, the opinion of the participants of physical education (PE teacher and students) and non-PE teachers were examined.

Table 2: Means of educators (PE teachers (tt) and non-PE teachers (nt) and students (t)) (means between 0 and 100) and the results of the significance test (N=1577)

<table>
<thead>
<tr>
<th>Statements connected to aims</th>
<th>PE teacher (tt)</th>
<th>Non-PE teacher (nt)</th>
<th>Students (t)</th>
<th>Differences, correspondences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students started to play sport out of the PE lessons.</td>
<td>31,38</td>
<td>22,64</td>
<td>59,77</td>
<td>There is a significant difference between the opinion of the groups per pair</td>
</tr>
<tr>
<td>The relationship between PE teachers and students became better.</td>
<td>55,50</td>
<td>39,18</td>
<td>73,18</td>
<td>There is a significant difference between the opinion of the groups per pair</td>
</tr>
<tr>
<td>The expectations of the PE teacher in the lesson became higher.</td>
<td>45,91</td>
<td>33,86</td>
<td>38,24</td>
<td>Non-PE teacher and student p=0,060</td>
</tr>
<tr>
<td>The students become significantly more skillful due to PE lessons.</td>
<td>59,36</td>
<td>42,19</td>
<td>70,29</td>
<td>There is a significant difference between the opinion of the groups per pair</td>
</tr>
<tr>
<td>There is more time to play in PE lessons.</td>
<td>72,63</td>
<td>58,41</td>
<td>70,54</td>
<td>PE teacher and student p=0,735</td>
</tr>
<tr>
<td>Students can recognise more ways of movement and more kind of sport.</td>
<td>67,66</td>
<td>56,42</td>
<td>73,51</td>
<td>PE teacher and student p=0,080</td>
</tr>
<tr>
<td>Students became more health-conscious.</td>
<td>45,90</td>
<td>32,60</td>
<td>74,02</td>
<td>There is a significant difference between the opinion of the groups per pair</td>
</tr>
<tr>
<td>Students take bigger care of nutrition.</td>
<td>31,93</td>
<td>24,08</td>
<td>46,99</td>
<td>There is a significant difference between the opinion of the groups per pair</td>
</tr>
<tr>
<td>Students are significantly more tired due to PE lessons.</td>
<td>25,15</td>
<td>34,82</td>
<td>35,77</td>
<td>Non-PE teacher and student p=0,945</td>
</tr>
<tr>
<td>Lessons have a better atmosphere.</td>
<td>49,75</td>
<td>28,14</td>
<td>71,68</td>
<td>There is a significant difference between the opinion of the groups per pair</td>
</tr>
<tr>
<td>The community spirit was improved in the lessons.</td>
<td>44,83</td>
<td>28,98</td>
<td>73,51</td>
<td>There is a significant difference between the opinion of the groups per pair</td>
</tr>
</tbody>
</table>

Measuring the mean points of the answers for the statements, one can observe that students are those who have the highest means. A significant difference could be detected between PE teachers and non-PE teachers. PE teachers are those who are more tolerant regarding the agreement with the statements related to the aims in comparison with non-PE teachers.
PE teachers (mean=72.63) agree with the regularity of playing at PE lessons in the highest ratio. It can be observed that this is the statement which was marked with a high mean by students as well (mean=70.54) and no significant difference could be seen between the attitudes of the two sample (p=0.735). That is to say, this aim is recognised by both groups. The opinion of non-PE teachers differs from this, showing a lower value (mean=58.41) namely they do not think that there is more time for playing in PE lessons. This differs significantly from the opinion of PE teachers and students as well.

On the basis of the answers of the students, the highest mean point can be found regarding health-awareness (mean=74.02). The opinion of both teacher groups differed from this (mean_n=45.90; mean_t=32.60). This means that students think that they become more health-conscious due to PE lessons while their teachers do not experience this health-improving effect of PE lessons among their students.

Regarding the statement ‘The expectations of the PE teacher in the lesson became higher’, no significant difference can be detected between the opinion of students (mean=38.24) and non-PE teachers (mean=33.86). From the mean, it can be deduced that they do not agree with this aim. PE teachers were those who marked this statement with the highest mean (45.91) and this opinion differs significantly from the opinion of non-PE teachers and students. They suppose that their expectations have increased toward the students that were not perceived by them (as it can be seen according to our results).

In case of the statement ‘Students can recognise more ways of movement and more kind of sport’, no difference could be detected between PE teachers (mean=67.66) and students (mean=73.51), they both agree with this aim. However, the mean of the non-PE teachers (mean=56.64) shows a lesser agreement with this aim.

The statement ‘Students are significantly more tired due to PE lessons’ was marked with a low average point by all of the actors, thus all of them think that students do not become more tired during the day because of the implementation of the everyday physical education. The agreement with this statement is significantly higher among PE teachers.

We can claim that students are the most receptive and they confirm the accomplishment of the aims similar to PE teachers. However, non-PE teachers are rather critical of the aims and tasks. This can influence the results of the impact assessments, even when they are only outsiders of the progress as the institutional actors of the alteration.

Thereby, it can be stated that our hypothesis was not confirmed as the opinion of the students showed a higher difference from the opinion of PE teachers and non-PE teachers regarding most of the statements.

In our second hypothesis, we wanted to observe whether a strong correlation exists between the educators and students of the different institutions. To measure this, cluster analysis was applied where the sample was categorised according to the attitude values of the statements. Furthermore, it was investigated whether a significant difference could
be detected regarding the agreement of the statements according to the type of the settlement of the institutions. For this, crosstabs were made where the different settlements were the explanatory variables (Table 3).

Table 3. The distribution of the statements connected to the aims of the National Curriculum 2012 according to the type of the settlement

<table>
<thead>
<tr>
<th>Statements connected to aims</th>
<th>Type of settlement</th>
<th>Mean point</th>
<th>ANOVA p=</th>
<th>Significance values of the between-group differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students started to play sport out of the PE lessons</td>
<td>county seat</td>
<td>49.85</td>
<td>,04</td>
<td>city-municipality p=0.003</td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>53.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>45.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The relationship between PE teachers and students became better.</td>
<td>county seat</td>
<td>63.86</td>
<td>,128</td>
<td></td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>67.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>62.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The expectations of the PE teacher in the lesson became higher.</td>
<td>county seat</td>
<td>34.63</td>
<td>,000</td>
<td>municipality-county seat p=0.000; municipality-city p=0.004</td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>36.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>43.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students become significantly more skillful due to PE lessons.</td>
<td>county seat</td>
<td>60.79</td>
<td>,000</td>
<td>city-municipality p=0.002, city-county seat p=0.000</td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>63.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>61.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is more time to play in PE lessons.</td>
<td>county seat</td>
<td>69.22</td>
<td>,174</td>
<td></td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>68.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>66.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students can recognise more ways of movement and more kind of sport.</td>
<td>county seat</td>
<td>66.99</td>
<td>,011</td>
<td>city-county seat p=0.020</td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>71.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>70.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students became more health-conscious.</td>
<td>county seat</td>
<td>60.05</td>
<td>,000</td>
<td>city-county seat p=0.002; city-municipality p=0.001</td>
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<tr>
<td></td>
<td>city</td>
<td>62.20</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>61.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students take bigger care of nutrition.</td>
<td>county seat</td>
<td>40.50</td>
<td>,267</td>
<td></td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>42.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>39.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students are significantly more tired due to PE lessons.</td>
<td>county seat</td>
<td>31.85</td>
<td>,000</td>
<td>municipality-county seat p=0.000; municipality-city p=0.031</td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>34.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>39.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lessons have a better atmosphere.</td>
<td>county seat</td>
<td>58.97</td>
<td>,000</td>
<td>city-county seat p=0.000, city-municipality p=0.000</td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>66.83</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>municipality</td>
<td>57.44</td>
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</tr>
<tr>
<td>The community spirit was improved in the lessons.</td>
<td>county seat</td>
<td>58.56</td>
<td>,000</td>
<td>city-county seat p=0.000, city-municipality p=0.000</td>
</tr>
<tr>
<td></td>
<td>city</td>
<td>69.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>municipality</td>
<td>59.45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

During the analysis, no difference could be detected in case of three statements as the type of the settlement does not determine the answer to these statements. An agreement can be seen that the relationship between students and PE teachers became better and there is more time to play during the lessons. However, none of the groups agrees with the statement that students take bigger care of their nutrition.

Investigating the other statements (students do more sport, they are more health-conscious, the lessons have a better atmosphere, and the community spirit was improved), higher means can be seen in case of schools of the cities and the aims and tasks are managed to realise in a higher ratio in these institutions. Regarding the schools of the municipalities, significantly higher values can be experienced compared to the two other
groups in case of those statements which explain negative attitudes like students are more tired and the expectations of the PE teacher are higher as well.

For further deeper analyses, the participants of the sample were categorised with cluster analysis. Thus, the sample could be categorised into four groups:

1. group: critical of the implementation of the aims
2. group: moderately critical of the implementation of the aims
3. group: accepting the implementation of the aims
4. group: praising the implementation of the aims

According to this, the distributions of the type of the settlement (county seat, city, and municipality), and the opinion of the educators (PE teachers and non-PE teachers) and students were measured (Table 4).

<table>
<thead>
<tr>
<th>Statements connected to aims</th>
<th>Cluster groups</th>
<th>Critical</th>
<th>Moderately critical</th>
<th>Accepting</th>
<th>Praising</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students started to play sport out of the PE lessons</td>
<td>13</td>
<td>30</td>
<td>70</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>The relationship between PE teachers and students became better.</td>
<td>26</td>
<td>60</td>
<td>70</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>The expectations of the PE teacher in the lesson became higher.</td>
<td>30</td>
<td>50</td>
<td>25</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Students become significantly more skillful due to PE lessons.</td>
<td>27</td>
<td>56</td>
<td>72</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td>There is more time to play in PE lessons.</td>
<td>48</td>
<td>67</td>
<td>72</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Students can recognise more ways of movement and more kind of sport.</td>
<td>45</td>
<td>66</td>
<td>74</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>Students became more health-conscious.</td>
<td>22</td>
<td>52</td>
<td>75</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>Students take bigger care of nutrition.</td>
<td>13</td>
<td>36</td>
<td>32</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>Students are significantly more tired due to PE lessons.</td>
<td>37</td>
<td>42</td>
<td>24</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Lessons have a better atmosphere.</td>
<td>17</td>
<td>54</td>
<td>69</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>The community spirit was improved in the lessons.</td>
<td>18</td>
<td>54</td>
<td>71</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>N=</td>
<td>291</td>
<td>434</td>
<td>310</td>
<td>441</td>
<td></td>
</tr>
</tbody>
</table>

Responders belonging to the critical group agree mostly with the negative results; according to their opinion, students are more tired and the expectations of the PE teachers are higher as well. Besides this, students won’t do more sport and won’t live or eat in a more health-conscious way. The moderately critical members recognise that several kinds of sport can be acquired; however, they also suppose that students are getting tired during the day because of the PE lessons. Regarding the group with accepting attitudes, the value of the agreement with the negative statements decreased and high values can be seen regarding most of the positive statements. Students are more health-conscious, there is more time to play, they can acquire more kind of sport and their relationship with
the PE teacher is better as well. In case of the members of the praising group, high values can be observed regarding all statement which confirms the aims and tasks of the PE lessons.

Regarding cluster groups, we measured the distribution of the educators and students and the types of the settlements in each cluster group. It can be seen that non-PE teachers belong to the critical group, PE teachers belong to the moderately critical group and students belong to the laudative group. According to the size of the settlement, schools of the municipalities are moderately critical, schools of the cities are praising and no significant difference can be detected in the group regarding the schools of the county seats.

It can be stated that our hypothesis was partly confirmed as higher agreement can be shown between the participants of the schools compared to the measurement of the whole sample. However, in case of the investigation of the type of the settlement, a higher agreement could be detected by the schools of the cities compared to the schools of the municipalities.

Conclusions

Compared to the nations with more developed health-consciousness, the Hungarian adult and youth population can be described with a cultural delay regarding physical culture thus the value of health-awareness and life-long physical exercise is lower in the behaviour and attitudes of the Hungarian people. Our research sample was the North Grate Plain region, and we assumed that institutional education significantly contributes to the health-promoting strategies, implementations and aims which catalyses everyday physical education which is mandatory on the 1st, 5th and 9th grades from the school year 2012/2013 and it is implemented gradually grade by grade. This is in measurable interaction with the inner participants of the school, the users of the school and the leaders of the development as well. In this ongoing process, educators, especially PE teachers have a serious task and effect whose primary task is to have a longtime influence on the development if the students' personality through the instruments of sport

With our self-made questionnaire which was prepared in accordance with the aims determined in the National Syllabus, the opinion of PE teachers, non-PE teachers and students could be measured. Students are the most accepting and they confirm the accomplishment of the aims similar to PE teachers. However, non-PE teachers are rather critical of the aims and tasks. The higher means of the PE teachers and students taking part in physical education confirm the fulfilment of the aims. The type of the settlement is not determining. It can be experienced in case of all types that the relationship between students and PE teachers became better and there is more time to play, however, none of the groups agrees with the statement that students take bigger care of their nutrition. Regarding city schools, students do more sport, they are more health-conscious, the atmosphere of the PE lessons is better and the community spirit improved as well. By the
schools in municipalities, students are more tired while the expectations of the PE teachers are higher.

Four clusters were categorised and during their comparison, it was confirmed that our hypothesis was only partly justified as a higher agreement can be seen between the characters of the schools compared to the measurement of the participants of the whole sample. However, regarding the investigations according to the type of the settlement, a higher agreement could be experienced in case of city schools instead of the schools in municipalities.

Our research investigated the concerned characters and types of settlements of the region thus the current status of the realisation of the implementation in a pioneering way. On the basis of the related pre-researches, we suppose that our results contribute to the measurement of the changing values of physical culture and sample and it can provide a practical support to formulate the following tasks of the education on health-conscious behaviour.

References


Voldemar Tomusk

Abstract

Two major developments mark the past quarter of a century in higher education research in Europe since the adoption of the Treaty of Maastricht. First among which is the formation of a pan-European level in higher education research as opposed to previously predominantly nationally focused research. Second, however, is the relocation of the research from the academia to a grey territory in the intersection of politics, policy, consultancy, administration and academic research, to the effect of weakening the extent to which science as a social institution guides the manner in which such research is being conducted and the results disseminated. Being driven by the European Commission’s formal need to stress the economic dimension of higher education and the EU’s strategic, although not necessarily well publicised, political agenda of evolving the European Union into a federal political system, higher education’s cultural agenda is being undermined and the scope of academic freedom enjoyed by the higher education research community in Europe restricted.

Keywords: higher education research, universities, European Union, European Higher Education Area, academic freedom, political entrepreneurship

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Introduction

The European Union (EU) emerged in the aftermath of the World War II, as a result of a series of initiatives of European integration pursued to avoid further violent conflicts with possibly catastrophic outcomes between European states. The first among such initiatives driven by an explicit aim of preventing yet another Franco-German military conflict was founding the European Coal and Steel Community (ECSC) on the initiative of the French Prime Minister Robert Schuman in 1951, with Belgium, France, West Germany, Italy, the Netherlands and Luxemburg as its members. In 1957 another similar organization – the European Atomic Energy Community (Euratom) was established. The European common market project, being the direct predecessor of the European Union – the European Economic Community was also founded in 1957, with its executive institutions modelled after those of the ECSC and merged with the latter in 1967. Out of the ECSC’s Common Assembly has emerged the current European Parliament, from a High Authority – the European Commission, from a Special Council the European Council of Ministers and from a Court of Justice the European Court of Justice.

The EU builds on the earlier pan-European movement that had explicitly set its goal as that of founding the United States of Europe (see e.g. Coudenhove-Kalergi, 1943). However, as it had become painfully obvious after the World War II that European nations lacked the political will to accept a grand design for a new political configuration on the continent, the political goal, as Jean Monnet had suggested, was to be achieved by distinctly non-political means – by means of solving Europe’s practical problems – “bringing together men and practical matters” (Monnet, 1978: 367). The latter strategy has not proven to be entirely non-controversial, given a rise to accusations regarding European integration as an elitist conspiracy, charges of a democratic deficit bordering with a direct violation of the terms set by the EU legislation, undue political pressure and blackmail. In some instances the extremely high cost of reversing risky courses pursued, such as for example introducing a common currency, can be avoided only by means of further political integration. In such a manner answers to some fundamental questions, such as “who we are, where we are and what holds us together” (Scruton, 2017: 2) are left to emerge from solutions to economic problems.

As several of the EU member states have been cautious about delegating competence in education, including higher education, to the level of the Union on the grounds of concerns over national identity, higher education and higher education research have found themselves under the pressure of conflicting interests, while attempts seem to have been made to mobilise higher education research for the purposes of further political integration.

Universities, that just a few years earlier had defined their mission in terms of transferring culture from one generation to the next (CRE, 1988) were suddenly reduced, in order to fit the EU agenda, into economic agents, service providers and organizations of vocational training. Not all higher education researchers have been satisfied with the resulting
expectation for higher education research to accept the required re-definition of the field as a new European doxa (Bourdieu, 1977). Some may even see the situation as toxic in light of the merging culture of censorship and self-censorship and within the higher education research community.

Despite this appearing a noble cause, particularly in light of the 20th century European historical experience, unease is being found in parts of the higher education research community on the account of academic freedom being compromised amidst of political mobilisation to be achieved, as it so often happens, by other means.

**Higher Education Research under Pressure**

European integration within the framework of the European Communities and in particular, since the adoption of the Treaty of Maastricht in 1993, the European Union, has given a distinct impetus to creating, albeit through a backdoor, a European level in higher education, and as related to that – relevant higher education research. This development has brought a significant change to the previous pattern of higher education research in Europe where it was carried out predominantly by academic researchers on the national level (Teichler, 2015). The new emerging pattern has called for European-level higher education research, but also moved a significant part of it to a grey zone where consultancy, policy-making, politics and academic pursuits merge seamlessly into a knowledge production enterprise outside of the cultural norms and the mechanisms of self-regulation of science as a social institution; with its truth claims rendered increasingly problematic.

Deeper political integration in Europe was anticipated by the higher education community already in 1988, when some three hundred rectors of universities across from Europe signed in Bologna the Magna Charta of European Universities defining, however, the university mission in cultural terms CRE, 1988). In 1991 the European Commission issued its memorandum (Commission, 1991) introducing, among the others, its economic agenda towards higher education. Further initiative was taken by four governments in 1998 as ambitious as that of launching the European system of higher education (Sorbonne Declaration, 1998), leading to signing the Bologna Joint Declaration (Bologna Declaration, 1999) by ministers responsible for higher education from 29 countries – members of the European Union and candidates for the membership.

However, as such initiatives often probed the limits of the EU's treaty-based competencies, controversies were necessarily bound to arise. The entry Field of Higher Education Research, Europe contributed to the Encyclopedia of International Higher Education Systems and Institutions by professor Ulrich Teichler, one of the founders of institutionalised higher education research in Europe, ends in a somewhat ominous manner: “Thus, many higher education researchers in Europe seem to seek for a promising balance between the Scylla of isolated theoretical endeavour and the Charybdis of policy-based evidence” (Teichler, 2017). One may suggest accordingly that higher
Education research as a field, particularly in Europe, seems to be struggling striking an acceptable balance between the perceived, among the technocrats, real-life irrelevance as a somewhat esoteric metaphysical exercise and abandoning the principles of scientific inquiry, easily leading to charges of intellectual corruption. Meanwhile, Tomusk (Tomusk, 2011) has argued, applying a cosmological metaphor, that the microcosm of European higher education research might have fallen in the gravitational field of a significant quantity of non-visible dark matter to the effect of being shaped by an actor somewhat hidden from the public view. By commissioning research various actors, most notably the European Union with their not entirely transparent methods of agenda-setting, may have over the past quarter of a century been driving higher education research in Europe towards the dilemma suggested by Teichler.

Following Teichler (Teichler, 2003) and Normand (Normand, 2016), higher education research in Europe appears under the pressure to prove its practical usefulness in a somewhat radical manner - by means of confirming policies already in place and approving political agendas of some of the customers of the research. That to the effect that research thus produced may from the academic point of view appear as of distinctly low quality (Neave and Maassen, 2007). Neave and Amaral reveal one of the possible mechanisms how this is happening on the example of the so-called Bologna Process of creating the European Higher Education Area: “to move forward rapidly and successfully, the Bologna strategy needed to demonstrate as much to the member states as to the higher education and scholarly communities generally, that it had moved forward rapidly and successfully” (Neave and Amaral, 2008: 48). Scientific legitimacy to such claims of success is often derived from specially commissioned “research.”

One of the reasons why higher education research is vulnerable to external pressures may have to do with the “very fuzzy borderlines between research on the one hand, and on the other consultancy, administrative oversight, evaluation and other search for evidence” (Teichler 2015: 816). Historically, as Teichler (Teichler, 2003) has shown, higher education research has been excessively enthusiastic regarding the ongoing reforms and “somewhat blind” to the “mixed outcomes” since the 1970s. However, even with a historic track record like this, charges of evidence being doctored suggest the dawning of a new era.

One of the problems academic higher education research appears to be facing is that the production of knowledge on higher education in Europe is being done not only by academic researchers identified as higher education researchers or researchers from other fields of knowledge, such as sociology, political science, economics, public administration and others with an interest in higher education related issues, but also by representatives of various non-academic professions, administrators and political pundits and activists, in organizations representing widely different understandings of what constitutes knowledge and what purposes it may legitimately serve. The body of knowledge thus assembled is not necessarily systematic, lacking “a common theoretical
framework, a comprehensive information base and overarching network of communication” (Teichler, 2015: 816).

The process of constructing the European Higher Education Area has inspired many plans and ideas, fruitful and otherwise. For example, the prospect of launching a pan-European mandatory accreditation mechanism made in its time mouths watering for multi-billion Euro and more worth of consultancy opportunities in many offices, including those belonging to so-called intermediary or buffer organizations, consultancies on the both side of the Atlantic, and even auditing firms. A prospect to accredit thousands of universities between the Atlantic and Pacific Oceans would not only have represented the promise to put butter on the bread, but also add a good spoonful of sturgeon caviar from the Caspian Sea. Intellectual concerns are likely forced to take the backseat when money of such magnitude speaks.

For its organizational base, a significant part of higher education research in Europe appears being conducted outside of the institutionalised scientific research, that is – on a grey territory where the self-regulatory principles of science as a social institution do not necessarily apply. Intriguingly enough, according to Teichler even the principles of academic freedom may not necessarily apply to such research (Teichler, 2015: 835). One can argue that there might be a connection between the restrictions to academic freedom and the policy-based evidence emerging from some higher education research, as otherwise the institution of science would be well capable correcting such anomalies. However, as higher education research funding in Europe remains limited, even academic researchers conducting independent evaluations of the EU’s programmes value highly the chance to be invited for a similar assignment in the future. Neave (Neave, 2004) describes the phenomenon of research being in such a manner biased by interests of a commissioning agency as that of being attracted to the “Queen’s schilling.” In such situations, the process of contracting the research may in some form or another include delineating the scope of acceptable outcomes.

**Science in the Intersection of Knowledge and Politics**

According to the classical understanding science should stand separately from the politics and politics having no influence over the findings of science (Searle, 1971). Tetlock has warned the worst possible consequences rising from the mixing politics with science – the extent to be consumed by the “scientific hell” where science loses its credibility because of expressing politically influenced views (Tetlock, 1994: 510).

Science, as Weinberg (Weinberg, 1974) argues, is often brought in as an independent arbiter to judge between competing political or social agendas. However, the competing agendas have their consequences on human lives and science, particularly social science, cannot pretend to be blind to the impact of the recommendations rising from its findings. While science offers an easy access to legitimacy in otherwise complex political situations, as in the case of many faced by the European Commission (EC) – an EU institution
constituting its executive arm, scientific calculation may not appear the best ground on which complex moral and political decisions should be preferably made, unless one is ready to subscribe to radical Darwinism in social, economic and political matters. Sub-optimal situations, such as for example the one suggested above by Teichler, may easily rise when for the sake of convenience science is brought in to legitimize a public policy decisions made according to a certain presumably higher-order, although unspecified, value. In such situations science, exemplified in the current case by higher education research, is formally brought in as an independent arbiter, while its independence may have been compromised at the outset. Impatient liberal elites may perceive science as a shortcut to avoid complex negotiations, consensus building and development of a common culture, particularly in partnership with those perceived representing less progressive views (Luce, 2017).

In the case of the Bologna Process the situation is particularly complex, as it was initially envisioned for the purposes of three European governments – France, Germany and Italy - finding leverage by means of the 1998 Sorbonne declaration (Sorbonne Declaration, 1998) against their universities to force them to reform following the United Kingdom’s example (Tomusk, 2006b). The Process has been subsequently used for different purposes, each time constructing a specific mobilizing narrative at any particular level targeted – wider Europe, the European Union, the EU combined with the European Economic Area (EEA), individual countries, individual higher education institutions, units, disciplines and groups. Bringing in science to such a situation to report on the implementation as if this was a single linear process almost by necessity leads to revising the basic principles of scientific inquiry.

If Nixon (Nixon, 2008) is correct suggesting that academic practices are oriented towards truthfulness, accuracy, sincerity, respect, authenticity, courage and compassion, significant part of higher education research production in Europe can no longer be traced back to academic practices. Following Normand: “Expertise and new modes of knowledge production outside the academic space have gained legitimacy, while the belonging and identification to a same discipline has been gradually eroded” (Normand, 2016: 223).

According to Gornitzka and Sverdrup: “Drawing on scientists as the main information providers would thus underline and legitimise the [European] Commission’s autonomous basis for action, independent of national, societal and partisan interests” (Gornitzka and Sverdrup, 2011: 52).

Research on the European Union, including research on higher education serves, however, a far deeper purpose than merely legitimizing its policies. Science is being used, although some might say that abused, in order to produce a stabilized EU narrative; to produce and disseminate codified knowledge in the form of a dogma to be mainstreamed through various channels such as media and education.
Alexander Stubb, a former Minister of Foreign Affairs of Finland, as recently described the EU decision making process as being usually consisting of three phases – “crisis, chaos and sub-optimal solution” (Alexander Stubb 2018). For no surprise is the European Union thus emerging as a “regulatory patchwork” (Elken et al. 2011) full of conflicts, contradictions and inconsistencies. It is the role of the jealously guarded science to normalize the picture by producing out of a complex, not necessarily coherent and to some extent unknown “world” a rational and meaningful “reality” (Boltanski, 2011). Researchers also appear working on attributing consistent meanings to neologisms and mobilising poetic expressions emerging from EU institutions, such as for example “Europe of Knowledge” (Elken et al., 2011). It may be therefore argued that the European Union as it is known to the public is to a significant degree created and maintained by academics researching various aspects of the Union. On the other hand, while scientists as professionals are heavily involved in the expert groups of the European Commission (Gornitzka and Sverdrup, 2008), the extent to which the positions they express represent that of science as an institution and specific disciplines rather than providing the cover of higher level legitimacy to the decisions already made, attribute meaning to the meaningless and read rationality into the irrational remains unclear.

**Higher Education Research and the Multiple Worlds of European Politics**

To the extent it is related to the EU, higher education research in Europe is being conducted in a politically charged environment. Historically, EU has been establishing its competence in higher education against the will of several of the member states (Elken et al., 2011), while the main thrust of the EU’s engagement with higher education is that of the economic competition, the latter alienating, at least to the extent this would not frustrate their own immediate economic interests, much of the academia.

In his early article on the Bologna Process Tomusk (2004) identified three distinct dimension in the European higher education project – cultural, political and economic. Relatively early on in the 1990s the European Commission seems to have reached a strategic decision to see higher education predominantly through the economic lens, as opposed to the cultural as suggested earlier by the signatories of the Magna Charta, the political that has remained predominantly hidden or the social dimension that was in a rather unfortunate manner reduced to the single issue of student fees. In a manner of which deep controversy still remains to be discussed, the prevalence of the economic interests has rendered the European knowledge society discourse a logical part of the imperialist project as explained by John Atkinson Hobson as early as in 1902. It may be therefore worth quoting his thoughts more extensively:

_In a word, the investors and business managers of the West appear to have struck in China a mine of labour power richer by far than any of the gold and other mineral deposits which have directed imperial enterprise in Africa and elsewhere; it seems so enormous and so expansible as to open up the possibility of raising whole white populations of the West to the position of “independent gentlemen,” living, as do the_
small white settlements in India and South Africa, upon the manual toll of these laborious inferiors. For a parasitic exploit so gigantic the competing groups of business men who are driving on their respective Governments might even abate their competition and cooperate in the forceful steps required in starting their project (Hobson 1902: 334).

Meanwhile, the steel mills in England have been closed, being replaced in many traditional industrial cities – Manchester, Sheffield, Birmingham and others – by universities inhabited by ladies and gentlemen once aspiring for independence, but more recently rendered to the position of the academic work force, not entirely dissimilar to the workforce employed by the earlier industries. Out of the UK’s student population 19 per cent come from abroad, making an annual net contribution of 20.3 billion pounds sterling to the Kingdom’s economy; with a quarter of international students coming from China (London Economics, 2018). Hobson would not have been surprised. Neither would he have been surprised that after having demoralised their working classes, the West has come to the point to demoralise the lower and middle ranks of their academia. Until recently this was not seen as a problem.

For the European Union, the United Kingdom served for a long time as an example according to which to organize its higher education as a profitable service industry. The outcomes so far have been mixed or less, while following the BREXIT referendum in the UK in 2016 to leave the Union, academics on the continent show little sympathy to the UK’s predominantly pro-EU academics perceived as greedy in their aggressive pursuit to take home the largest share of the EU funding from joint projects (Cortois, 2018).

Higher education research related to European-level initiatives has, with a few exceptions (see e.g. Tomusk 2004, Tomusk 2006a), been predominantly of unrealistically uncritical nature (Teichler, 2003, Neave and Amaral, 2008, Elken et al., 2011). It can be argued that this may be caused by the EU institutions’, particularly European Commission’s, interest to use their resources for the further political integration of the Union as well as strengthening its own competence in higher education. The EU’s higher education initiatives, particularly the Bologna Process, have also inspired politically motivated responses that may benefit from the legitimization on scientific grounds from EHEA member countries and beyond, as well as individual researchers and research groups positioning themselves in this environment. Kazakhstan, for example sought EHEA membership as a part of a larger initiative to gain European legitimacy by an autocratic regime with a dismal human rights record (Tomusk, forthcoming).

According to Teichler (Teichler, 2015), there are four ways in which the EU funds higher education research:

1. The European Commission commissioning studies for the purposes of evaluation and monitoring of the major EU programmes.
2. “various modes and channels for the EU to initiate policy-related analyses or for higher education researchers to apply for financial support of such analyses” (Teichler, 2015: 838).
3. Framework Programme research funding.
4. European Commission funding research on the implementation of the Bologna Process, in coordination with the Bologna Follow-up Group.

Representatives of the European Commission, including Commissioners, have expressed their impatience with broad intellectual discussions over the role of higher education in contemporary societies, calling upon the academia to vigorously implement the accepted plans, particularly the Bologna Process (Tomusk, 2004). Accordingly, the listed funding options, with the exception of the Framework Programmes, suggest the EC being able to identify the projects meeting its special needs or inspire initiatives serving its tactical purposes without a need to launch open grant competitions on the grounds of the intellectual merit.

Recently Normand (Normand, 2016) has demonstrated how “various modes and channels” of distributing the EU higher education research funding can be activated. According to Normand the key in this is being played by political entrepreneurs – individuals perceived as progressive in the context of the European integration processes, having strong connections both in the political and academic spheres (see e.g. Vught and Ziegele, 2012: xi). Such an individual may, for example, appear as a renowned academic and academic leader, consultant to the EC, with numerous memberships in advisory bodies and roles in various third-sector organizations.

Suggesting an emerging crisis situation is an effective way to attract the Commission’s attention (Normand, 2016: 151). A manifesto authored by Ritzen, Blakstone and Balint (Ritzen et al., 2010) offers an example how inducing panic can be used in an attempt to gain access to the EU institutions. Political entrepreneurs with their multiple identities can also play a central role assembling an expert body to research the crisis situation and offer a remedy. Such expert groups include experts from academia, various professions and public figures, led by an academic (Normand, 2016; see also Vught and Ziegele, 2012: v-vi). While the output of such expert groups may present itself as research, as Teichler (Teichler, 2015) and Normand (Normand, 2010) argue, usual academic norms do not necessarily apply to it, even if a group may include academics, as the normally do.

Following-up on a perceived crisis situation helps the Commission extending the EU’s competence in higher education that, having no treaty base, has been created by rulings by the European Court of Justice (Garben, 2008) and most recently, as a rule, extended by incremental steps taken by the European Commission (Elken, 2017). The latter approach, however, has its shortcomings.

Lord Patten, himself a former European commissioner and the current Chancellor of the University of Oxford, has described such a gradual expansion of the Union’s competence as “playing grandmother’s footsteps”: “Take a political step forward, and if the electorate does not notice then take the ground gained as the starting point for the next advance. This discredits the EU, and gives voters the impression that it is an elitist conspiracy”
Despite its negative sides, the practice, also described as “creeping competence” (Pollack, 1994), has found a wide use. The Commission's expert groups can play a significant role in expanding the EU competence in such a manner (see e.g. Elken, 2017).

The EU institutions, particularly the Commission, may perceive their mission as a noble one – imposing Mannheim's liberal utopia (Mannheim 1948) from above against the unenlightened will of the electorate. One major issue with such an approach is that it cuts short its very objective – liberalism - and makes it difficult to tell a clear difference between the entities behind the acronyms such as the EU, the PRC and the last one in the line – the DPRK. However, as a Norwegian crime thriller writer Jo Nesbo has reminded us recently, in days when academics have acquired the habit of weighing their words more cautiously - “If you want to make all the drastic changes that are needed, the slowness of democracy and the free rein it gives to simple-mindedness are no good” (Nesbo 2018: 149). The advice seems to have been often followed, although not necessarily that often openly proclaimed. Still, the simple-minded have at least in some countries, on both sides of the Atlantic as well as right in the middle of it, recently appeared less gullible than the elites have expected (see e.g. Goodhart 2017).

Although the Bologna Process was launched outside of the EU framework and its membership reaches well beyond the EU membership (Garben, 2008, Tomusk 2006b) as far as Kazakhstan, the EU has incorporated it in its own strategic development frameworks such as the Lisbon Agenda (Elken et al., 2011). It has been argued that using such soft-law instruments in steering EU policy implementation generates “eclectic, divergent, unpredictable or perverse outcomes” (Sin et al., 2016: 3). There appears to be, however, a significant gap between the statements as the latter emerging in independently conducted academic studies and the official Bologna Process' reporting commissioned to the EU’s own information agency EACEA-Eurydice (Teichler, 2015: 838). Internationally accessible knowledge on higher education in Europe has dramatically increased in connection to the Bologna Process and remedied the previous situation where higher education research in Europe was conducted predominantly on the level of nation states (Teichler, 2015). This new knowledge production, however, has not lead to high-level scholarly research to be conducted across Europe.

Several edited volumes have been compiled in conjunction with the bi-annual ministerial meetings, some of them exceptionally voluminous (see e.g. Curaj et al., 2012, Curaj et al., 2015). While these publications may have been initiated under the pretext of allowing researchers’ voice to be heard in the Bologna Process’s discussions, the presence of the researchers among the authors of such works remains limited (Teichler, 2015). The issue, however, is not necessarily the one about involving more academics in the process, as long as the institutional basis of such research and the structure of incentives in place do not allow full respect to the principles of academic freedom. Some expert reporting on the Bologna Process conducted under academic leaderships shows uncritical fusion of empirical facts and politically desirable but not necessarily true states of affairs (see e.g.
Knowledge production initiatives inspired by the Bologna Process may resemble a second-level political process in which aspiring knowledge brokers and political entrepreneurs struggle for a reputation and space in the politicized knowledge industry of the Bologna Process. Meanwhile the Process itself, being increasingly relegated to European periphery, as, once again, the outcomes of this reform initiative threaten to appear more mixed than previously anticipated.

For non-EU-EEA countries the Bologna Process was often seen as a step towards a full membership in the Union, in many instances accompanied with expectations to increase the level of higher education funding to that of Western Europe - that is up to ten times. Even for countries with no prospect to join the union, EHEA membership was perceived as a way to sell European degrees to third country students at an inflated price (see e.g. Tomusk, 2006c). Higher education research was called in to support the respective ambitions of states and expectations of academic communities and higher education institutions. It has been subsequently noticed that the format of Bologna Process progress reporting has allowed for significant “window dressing” (Elken et al., 2011). The issue becomes particularly acute when the scientific truth produced by some of the academic staff may have a direct impact on the university’s public image or may influence the funding body’s decisions. In an increasingly competitive environment false reporting may be one of the serious threats higher education is facing (Teichler, 2003).

In the context of heightened political and economic interests in the Bologna Process and other EU-driven higher education initiatives, on a national level and below, formerly relatively marginalized researchers of education and higher education may have gained a voice vis-à-vis university leaderships and national governments to offer expertise on the nature of and the requirements related to the EU’s and European higher education initiatives – access to political capital allowing, for example, pontifying academic aristocrats from the faculties of theoretical physics or molecular biology regarding the European norms of organising their teaching. Under other historical circumstances such cadres have been also known as the kommissars, organizing, for example collective farms in the post-revolutionary Russia. Whether in a collectivised village or university hopelessly aspiring for a world-class status – the power a kommissar projects is necessarily of a political origin.

**Conclusions**

Teichler has offered a vision of higher education research that is future-conscious, historically informed, critical, but also pro-active anticipating new, emerging thematic areas currently not in the limelight (Teichler, 2003). Meanwhile, however, the field has moved in a different direction. While the presence of the European Union, particularly through its Commission, has been instrumental rapidly expanding the European level in higher education research, the research that is so emerging is very different from the visions academic higher education researchers in Europe have expressed their hopes for. The European Union higher education research dominated by experts is no longer
compatible with "scientific research principles as embedded in academic tradition" as "[e]xpertise because of its utilitarian inclination, is at the intersection between science and policy" (Normand, 2016). Accordingly, instead of higher education research that is looking with the eyes open five and more years down the road, as Teichler expected, the field has been mobilised to back-up short-term policies as well as strategic political goals in a not always successful attempt to turn politicians’ dreams into self-fulfilling prophecies (Merton, 1968).

Intellectuals, perhaps in all ages, have come to think of history remaining on their side. Even if not immediately, then at least in a long term their efforts opening the truth would be recognized. There is, however, a fine line between following the intellectual calling and acting as a paid-off knowledge worker. There are organizational settings and contractual arrangements identified in this article that may reduce the truth content of any produced statement below an acceptable minimum. But who is to say how much a person needs to lie to become a pathological liar? In its attempt to perform a great leap forward – that is to overcome the nation state at an accelerated speed, is Europe not destroying the underpinnings of the continent’s long-term future by commissioning her academics to produce half-truth, quarter-truth and downright nonsense?

Misappropriating science by political elites and technocrats is only one side of the issue. The other side of it is the apparent unwillingness, due to the impatience or for some other reasons, to do the cultural and educational work deepening Europe in Europe would require.

Acknowledgment

This article started as a somewhat shorter piece of writing in a somewhat different genre for a different purpose. Somewhere on the way, however, I came to face a choice between of saying what I had thought was to be said, given of what several of my older colleagues, teachers and friends have said about some these things in their writings over many years, and following the advice received from censors to the effect of excluding what in my view was a critically important part of the paper and supress its most important conclusions. I did act according to my best understanding expanding the paper instead and submitting it to HERJ. My thanks go to Terhi Nokkala and Jussi Välimaa from the University of Jyväskylä for the comments on earlier versions of this article and the two anonymous reviewers from HERJ.

References


How do Students Perceive their Non-Traditional Peers at Romanian and Hungarian Universities?

Emese Beata Berei

Abstract

Starting from a student-centre educational policy research approach (Kozma 2009, ESU 2012), this paper is discussing issues linked to the concept of equity in higher education in two EU member countries, Hungary and Romania. I analyse the way of looking at non-traditional students, confronting the policy conceptions with the students’ perceptions. My objective was to explore the collegial attitude of students toward their non-traditional peers and to define specific types of preferences. The first part of the study is an overview of the higher educational policy in Romania and Hungary, aiming to find out what kind of chance equality and compensation practices do they put into effect, and identify similarities and differences between them. It can concluded, that their use of concepts is different, but the problems are to a large extent the same: disadvantages background, disability, national minority status or being a foreign student. The second part of the research is based on empirical data from two surveys of student population conducted by CHERD-Hungary in the cross border region in 2012 (N=2618) and 2014-2015 (N=1536). I studied from comparative perspective the student attitude of acceptance/rejection toward non-traditional peers adapting the four grades Bogardus social distance measuring scale and using a statistical program to analyse data. Based on the policy analysis, the supporting attitude was measured on three dimensions: the attitude toward financial support, the attitude towards non-financial support and personal contact, divided in three possibilities, considering the intensity of the relationship. The hypothesis was based on previous research outcome related to the cross border area (Pusztai and Szabo 2014), that students’ way of looking at non-traditional groups is not homogeneous. The results of my paper confirm this, both type of attitude are present on two sides of the border: students are most supporting towards their economically disadvantaged colleagues and less supporting with their Roma peers. Also I concluded that student perceptions have any latent structure. I identified the following three approach/attitude factors: internal ethnic difference/Roma, economic disadvantage/disabilities and the foreign factor. It can be seen that students’ way of looking differs from the outlook of the educational laws: within the student community, the perception of Roma is the same perception of any other minority/ethnically different student group, while in the Romanian legal system Roma students are mentioned marginalized group.

Keywords: policy of equity, non-traditional students, student attitude, Romania and Hungary

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Context

This study is based on a research made in the cross-border region of the two neighbouring countries, Romania and Hungary. In both countries the population belongs to more than one nationality.

<table>
<thead>
<tr>
<th>Total number of population</th>
<th>RO28</th>
<th>HU29</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.1 million</td>
<td>9.8 million</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Population structure by ethnic belonging</th>
<th>RO28</th>
<th>HU29</th>
</tr>
</thead>
<tbody>
<tr>
<td>88.9% Romanians</td>
<td></td>
<td>93.5% Hungarians</td>
</tr>
<tr>
<td>6.5% Hungarians</td>
<td></td>
<td>3.2% Roma (according to non-official data 7.04%)</td>
</tr>
<tr>
<td>3.3% Roma (according to non-official data 9.19%)</td>
<td></td>
<td>3.3% other</td>
</tr>
<tr>
<td>1.3% other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Romania and Hungary are two post-socialist countries in Central and Eastern Europe (CEE). Hungary and a part of Romania (Transylvania region) were a part of the Austro-Hungarian Empire, strong influenced by the German education and training system, with early selection and dual system of vocational training, the proportion of the early school leavers is lower than in other EU countries. Romania's secondary education combines both general and vocational elements and the early school leaving rates is comparatively higher than in the rest in EU, researchers argue that the main of the reason is the higher proportion of Roma youth, excluded from the education system (Kogan 2008).

In both countries, after the II World War the communist system of Soviet type determined the character of higher education. As the result of the post-communist systemic change, a new educational reform started, the higher educational population quickly expanded and after the turn of millennium the Bologna system with three levels in higher education was duly introduced.

Diagram 1. Gross Enrolment Ratio (GER) between 1971-2014 in Romania and Hungary

Source: http://data.worldbank.org/indicator/SE.TER.ENRR?locations=HU&name_desc=false

EUROSTUDENT's newest data concerning the students' social and economic situation show in both countries a growing number of students with disadvantaged family background or living with disability.

Table 2. Non-traditional students in higher education in the two studied countries

<table>
<thead>
<tr>
<th>Students indicators</th>
<th>RO</th>
<th>HU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents with lower social standing%</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>Father with low educational background%</td>
<td>7.9</td>
<td>3.8</td>
</tr>
<tr>
<td>Mother with low educational background%</td>
<td>7.6</td>
<td>4.9</td>
</tr>
<tr>
<td>Father with low occupational status%</td>
<td>0.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Mother with low occupational status%</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Students with impairments%</td>
<td>6.8</td>
<td>7.8</td>
</tr>
</tbody>
</table>


Starting from the aspect, that students are main actors in educational process and policy makers (Kozma 2009, ESU 2012), in the following chapters I will discuss the equity concept in a twofold perspective: on the one hand at the level of national legislations, and on the other hand at the level of students, confronting the policy conceptions with the students attitude.

Policies of Equity in Higher Education as Reflected in National Educational Laws

In this chapter I would like to discuss in comparative perspective the legal provisions regulating higher education in Romania and Hungary, in order to find out what non-traditional student categories are mentioned and what kind of equity chance (equality and compensational practices) are included in the national law.

In Romania, such references are included both in the Law of National Education (1/2011) and in the Children Protection Act (272/2004). However none of the two laws includes a definition of what is meant by disadvantaged situation. The provisions concerning higher education are integrated in the Educational Law without being a separate unit. In the third part of the document several general principles are included, such as the principles of equitability, consultation with social partners and student centred education.

Further, paragraph 2 is prohibiting every kind of discrimination related to age, nationality, gender, social background, political, religious or sexual tendency, except the situations explicitly mentioned by law. The persons with physical impairment are mentioned only once in the document: physically hindered students are legally entitled to have unimpeded traffic opportunities inside the institutions of higher education and unrestricted access to all activities.

In section 205, paragraph 6, speaks about assuring supported budgeted places for students coming from the edge of society. Here are mentioned the Roma students, those

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30 Subjective assessment of social standing on 10-point scale
31 Elementary education group
32 Elementary occupational groups
coming from the villages and those from towns with less than 10 thousand inhabitants. In chapter 12, related to financing of higher education, the Law states that students are entitled to social support scholarships if they come from a family background with low income, orphan students and those coming from child protection system. The amount of scholarship is decided yearly by the university senates and shall cover the student’s meals and accommodation costs. Institutionalized students have right for free transport, students coming from low income family backgrounds, institutionalized and foreign Romanian nationalities have financial and accommodation support.

Students with ethnic minority backgrounds in Romania have right to study in their own language at all level of education, article 45 – 47 referring at the circumstances and conditions.

Analysing the implementation of equity related policies within the Romanian institutions of higher education, Jamil et al. (2014) found that though the Romanian government’s educational policy has aimed in 2013-2016 to assure social equitability, it didn’t work out a strategy concerning the social dimension of the higher education. There is no legal provision stating which groups are underrepresented in higher education and doesn’t exist a plan for putting compensatory measures into practice. Using the available information, he had identified underrepresented groups as it follows: children of parents with low income, students from villages, and persons with disabilities, Roma students, students who simultaneously work and learn.

In Hungary, since 2007 is in force a legal provision which consolidated the compensation practice in entering higher education for economically disadvantaged high school graduates, those living with disabilities and also for candidates for university admission, who have children in care (Kiss 2016). Currently, Hungarian higher education is regulated by the CCIV Law of 2011. The Law states that the senates of higher educational institutions shall establish a permanent committee to handle the students’ social problems.

Part 4, chapter XI of the Law, which refers to the legal relations and obligations of students, states in paragraph 41’s first line that persons in disadvantaged or cumulated disadvantaged situation, living with disabilities, belonging to national minorities, or with children in care are assured equal opportunities in both entering higher education and studying at higher educational institutions. At the same time the second line of the same paragraph emphasizes that in order to graduate students have to accomplish the learning requirements.

The Law of Higher Education defines disadvantaged student by reference to the Child Care Law: it is disadvantaged the person who is of age under 25 when entering into higher education and who is disadvantaged under the provisions of the Child Care Law. Disadvantaged students might have parents with elementary education, with low occupational status, segregate living place or unfavourable living conditions. Students coming from the state children/youth care system are considered persons with
cumulated disadvantage. At the same time, the Law of Child Care provides special measures of protection to children/youth with disabilities, in order to enhance their equality of chances and integration into society (V. Gonczi 2015). The persons with disabilities are regarded by law as a distinct category. Those who have more than one disability fall in the category of cumulated disadvantaged persons.

Further, I had studied what kind of compensational practice had put into effect the Hungarian Law of Higher Education in the case of non-traditional student groups. According to legal provisions, the compensational practice has two aims as it follows:

- in the process of admission in higher education the special student groups are supported by gaining extra points, scholarships and are waived from admission fee
- during the learning period, disadvantaged students receive financial supports such as scholarships or various refunds.

Roma are not defined as a special group by the Law, so this category is not among those entitled to receive compensations. The person who belongs here has compensational support if he or she is economically disadvantaged, cumulated disadvantaged, living with disabilities or with children in care. The Roma are mentioned in the Law only in connection with Roma vocational colleges. The Law secures that the foreign students from EU countries have right to study in Hungarian higher educational institutions and to compete for state scholarships under the same conditions as the Hungarian students.

At the same time, the Law provides advantage to foreign students having Hungarian nationality (most of them ethnic Hungarians from neighbour countries). Students with children in care are also given preference. They obtain extra points during the admission process and they are also offered financial support during their studies. There are also special scholarship programs offered by the Hungarian government which helped to great extent the economically disadvantaged, cumulated disadvantaged and Roma students to enter and finalize higher education (Szemerszki 2016).

Summarizing the characteristics of the legal provisions in Romania and Hungary, it can be concluded that their use of concepts is different in the two countries, but the problem formulation is the same: low income, marginalised living area, disability, cumulated disadvantages background, both referring to nationality and foreigner students also (table 3.). The Romanian legal system does not define the economically disadvantaged, cumulated disadvantaged or other categories which require support, only mentions some key concepts and principles. In contrast, the Hungarian legislation has evolved constantly since 1993, and defines precisely the basic notions and their parameters, having a strong cooperation with the Child Care System.
Table 3: Non-traditional students groups in Hungary and Romania in the perspective of the law

<table>
<thead>
<tr>
<th>RO</th>
<th>HU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-traditional student groups mentioned in educational laws</td>
<td>Non-traditional student groups mentioned in educational laws</td>
</tr>
<tr>
<td>-students with low income family background</td>
<td>-economically disadvantaged students</td>
</tr>
<tr>
<td>-marginalised living area background</td>
<td>-cumulated disadvantaged students</td>
</tr>
<tr>
<td>-students from child care system</td>
<td>-students with disabilities</td>
</tr>
<tr>
<td>-students with disabilities</td>
<td>-students with disabilities</td>
</tr>
<tr>
<td>-minority students</td>
<td>-students with different national affiliation</td>
</tr>
<tr>
<td>-Roma students</td>
<td>-foreign students</td>
</tr>
<tr>
<td>-foreign students</td>
<td>-students with children in care</td>
</tr>
</tbody>
</table>

The concept of compensation in higher education is different in Romania and Hungary but has also commonalities: special students are supported financial or non-financial in both countries.

Diagram 3: Non-traditional students’ compensation in Romanian and Hungarian legislation

Designed by the author

Research Approach, Method and Questions

Besides governmental organizations, students are also among the stakeholders who shape the educational policy (Kozma 2009, ESU 2012). Taking into account the importance of this fact, in the following part of the paper I will refer to the outcome of my research concerning student attitude towards their peers belonging to non-traditional groups.

In order to avoid ambiguities or misinterpretations, it is important to reach a definition of what I mean by non-traditional students. For the purposes of current research by non-traditional students I understand those students who are in one or more of the following situations: economically disadvantaged family background, living with disabilities, being Roma, living in national minority situation or foreign students. In this study I will not be occupied with the special situation of students with children in care, or other groups.

The quantitative international survey data to be used in the following analysis was collected and made available by the Higher Educational Research Centre of the University of Debrecen, Hungary, in 2012 and 2014-2015, by HERD (Higher Education for Social Cohesion Cooperative Research and Development in a Cross – border Area Project HURO/0901/253/2.2.2.), by TESSEE (Teacher Education Survey in Central and Eastern Europe) SZAKTARNET (TAMOP – 4.1.2.B.2-13/1-2013-0009 - Professional Service and
Research Supporter of the Regional Teacher Training Network in North Hungary) and by IESA (Research Application of the University of Debrecen RH/885/2013).

Table 4: The higher education institutions involved in research by year of data income and country (N)

<table>
<thead>
<tr>
<th>Higher education institutions</th>
<th>HERD 2012</th>
<th>IESA 2014-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Oradea</td>
<td>714</td>
<td>15</td>
</tr>
<tr>
<td>Partium Christian University in Oradea</td>
<td>407</td>
<td>40</td>
</tr>
<tr>
<td>Emanuel University in Oradea</td>
<td>136</td>
<td>-</td>
</tr>
<tr>
<td>Babes – Bolyai University</td>
<td>66</td>
<td>138</td>
</tr>
<tr>
<td>Sapientia Hungarian University of Transylvania</td>
<td>-</td>
<td>126</td>
</tr>
<tr>
<td>University of Debrecen</td>
<td>1118</td>
<td>1061</td>
</tr>
<tr>
<td>Debrecen Reformed Theological University</td>
<td>25</td>
<td>22</td>
</tr>
<tr>
<td>College of Nyiregyhaza</td>
<td>152</td>
<td>134</td>
</tr>
<tr>
<td><strong>Total number of students</strong></td>
<td><strong>2618</strong></td>
<td><strong>1536</strong></td>
</tr>
</tbody>
</table>


The research tried to reveal what means of support do the students think proper in connection with their special student-mates and what patterns can be identified in students’ attitude towards the special groups. Moreover, I studied from comparative perspective the student attitude of acceptance/rejection toward non-traditional peers.

Based on the policy analysis, the supporting attitude was measured on three dimensions: the attitude toward financial support, the attitude towards nonfinancial support and personal contact (acceptance of living together). Adapting the four grades Bogardus social distance measuring scale, the personal contact was divided in three possibilities, considering the intensity of the relationship: I charted to what extent students are willing to have fellow student, flatmate or marital relationship with their mates belonging to non-traditional groups.

During the investigation I used chi-test and factor analysis to understand student attitude in connection with the special student groups.

**Research Results**

**Student Supporting Attitude towards Non-Traditional Peers**

In the first stage of the research, I used the database HERD 2012 and tried to reveal what supporting forms the students think about in connection with special students. I studied the student attitude towards non-traditional peers in relation to three dimensions: acceptance/non-acceptance of relationship, financial support and nonfinancial support. Based on the results of the research by Pusztai and Szabo (2014) who first examined in Hungarian context the higher educational student attitude towards their fellow students living with disabilities, I supposed that the students’ way of looking at students belonging to special groups is not homogeneous, students think differently about the different special peer groups.
According to the opinions expressed by students, the special group they encounter most often in their student community environment is that of national minority students. In Hungary, students with disabilities are represented within student population in higher proportion compared to the situation in Romania.

Table 6: Higher education students with disadvantaged family background (%)

<table>
<thead>
<tr>
<th>Students indicators</th>
<th>HERD 2012 (N=1323)</th>
<th>IESA 2014-2015 (N=323)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father with low educational background (%)</td>
<td>29</td>
<td>31</td>
</tr>
<tr>
<td>Mother with low educational background (%)</td>
<td>29</td>
<td>21</td>
</tr>
<tr>
<td>Father with low occupational status (%)</td>
<td>29</td>
<td>21</td>
</tr>
<tr>
<td>Mother with low occupational status (%)</td>
<td>34,5</td>
<td>27</td>
</tr>
<tr>
<td>Parents with lower social standing (%)</td>
<td>12</td>
<td>23</td>
</tr>
</tbody>
</table>

From analysing the students’ demographical data (table 6.) I concluded that students who are disadvantaged due to their family background (the parents’ low schooling level, their lack of employment or the low social standing of parents) are present more than 10 % in both countries. Fonai (2012) analysing the HERD 2012 database, concluded that students with low socioeconomic status were 23, 7% in Hungary and 42, 2% in Romania Universities. Altogether, I considered that the numerical representation of non-traditional students is high enough that the students may formulate their supporting/ non-supporting attitude in connection with their student-peers having special characteristics. Concerning to presence of foreign students we have no empirical data and for this reason I will not formulate conclusions related to them.

Studying student attitude according to the three mentioned dimensions, I came to the result that compared to Hungarian peers, students from Romania are more supportive towards any kind of special peer group. In both countries, higher educational students are the most supporting towards the economically disadvantaged and the less supporting toward the Roma group. The difference between the two countries appears mostly in relation with the Roma and the national minority group: students from Romania are significantly more supporting with the Roma in respect of supporting them financially (OR=3,1), non-financially (OR=2,2) and of accepting to have relationship with them (OR=1,8).

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33 Elementary education level (IESC 1-3)
34 No employed
35 Subjective assessment of social standing on 10-point scale
In connection with their peers living with negative drawbacks – economically disadvantaged situation or disability – students agree more with financial and non-financial forms of support than with having relationship.

Table 7: Would you accept if you were a flatmate or if he/she would get non-financial or financial support one of the students belonging to the following groups: Roma, national minority/ living with disabilities/economically disadvantaged/foreign students? (I summarized the proportion of students who totally reject or rather reject) (N=2618)(%)

<table>
<thead>
<tr>
<th>Non-traditional student group</th>
<th>Flatmate</th>
<th>Non-financial support</th>
<th>Financial support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RO</td>
<td>HU</td>
<td>OR</td>
</tr>
<tr>
<td>Roma</td>
<td>43</td>
<td>58***</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>25</td>
<td>31.5***</td>
</tr>
<tr>
<td>National minority</td>
<td>23</td>
<td>32***</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>21</td>
<td>39***</td>
</tr>
<tr>
<td>Living with disabilities</td>
<td>25.5</td>
<td>33.5***</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Economically disadvantaged</td>
<td>14.5</td>
<td>18*</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Foreign</td>
<td>13</td>
<td>19***</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>18</td>
<td>35***</td>
</tr>
<tr>
<td></td>
<td>2.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** p<0.001 ** p<0.01, * p<0.05
Source: HERD 2012

Perceptions of Social Distance and Connectional Support towards those Belonging to Different Special Groups

According to the research by UNICEF (2014), in the countries which belonged to the Eastern Bloc, beside the lack of financial resources, the lack of relationships and social networks is also a problem faced by children and youth. That is why my research on attitude towards non-traditional peers touched on the subject of social distance and connectional support.

I studied the connectional attitude according to three dimensions: acceptance/non-acceptance of fellow student, flatmate and marital relationships. The data (table 7.) show that students are the most supportive towards the economically disadvantaged groups and the less supporting towards the Roma students. The difference between the Hungarian and Romanian minority students is the highest in connection with attitude toward national minority students. The students from Romania support the fellow student (OR=3,8), the flatmate (OR=4,8) and the marital relations (OR=3,3) with ethnic minorities to a greater extent than the students from Hungary, which can probably explained by the fact that most students in Romania are themselves minority members.

Concerning the level of acceptance of the fellow student relationship, I found that the students from Romania are more supportive than the students in Hungary in the case of any special group. They are two times more inclined to accept economically disadvantaged peers as fellow students (OR=2) and more than 2.5 times more ready to have supporting attitude towards the students with disabilities.
Table 8. Would you accept if you were in fellow student/flatmate/in marital relationship with one of the students belonging to the following groups: Roma/national minority/living with disabilities/economically disadvantaged/foreign students (I summarized the proportion of students who totally reject or rather reject) (N=1549)(%)

<table>
<thead>
<tr>
<th>Non-traditional student group</th>
<th>Fellow student</th>
<th>Flatmate</th>
<th>Marital relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RO</td>
<td>HU</td>
<td>OR</td>
</tr>
<tr>
<td>Roma</td>
<td>18</td>
<td>23.5*</td>
<td>1.4</td>
</tr>
<tr>
<td>National minority</td>
<td>4.5</td>
<td>15***</td>
<td>3.8</td>
</tr>
<tr>
<td>Living with disabilities</td>
<td>5.5</td>
<td>13***</td>
<td>2.6</td>
</tr>
<tr>
<td>Economically disadvantaged</td>
<td>4</td>
<td>8*</td>
<td>2</td>
</tr>
<tr>
<td>Foreign</td>
<td>3</td>
<td>8**</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Note: *** p<0.001 **p<0.01, *p<0.05  
Source: IESA 2014-2015

Focusing on the fellow student relationship, I also examined whether student perceptions have any latent structure. The factor analyses revealed that according to the student attitude toward national minority, ethnically different or Roma students form together a first factor, economically disadvantaged or living with disability students belong to a distinct group thus forming a second factor, while the foreign students create a third factor.

Table 9: Student perceptions towards non-traditional fellow student groups

<table>
<thead>
<tr>
<th>Non-traditional student group</th>
<th>Perceptions of national minority, ethnically different, Roma students</th>
<th>Perceptions of economically disadvantaged, living with disabilities</th>
<th>Perceptions of foreign students</th>
</tr>
</thead>
<tbody>
<tr>
<td>National minority</td>
<td>0.862</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnically different</td>
<td>0.741</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roma</td>
<td>0.626</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economically disadvantaged</td>
<td></td>
<td>0.772</td>
<td></td>
</tr>
<tr>
<td>Living with disabilities</td>
<td></td>
<td>0.660</td>
<td>0.857</td>
</tr>
<tr>
<td>Foreign</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IESA 2014-2015

Thus I identified the following three approach/distance factors: internal ethnic difference, economic disadvantage/disabilities and the foreign factor. It can be seen that students’ way of looking differs from the outlook of the educational laws: within the student community, the perception of Roma is the same perception of any other minority/ethnically different special student group, while in the national legislations Roma students are not mentioned at all. The way of looking at students with negative drawbacks – being in economically disadvantaged situation or living with disabilities – resembles the provisions of the Hungarian law offering compensatory advantages to these categories in entering higher education. The way of looking at foreign students appears to be distinct from the perception of ethnically different or Roma fellow citizens and the perception of students affected by negative drawbacks.

Summary

In view of the necessity to implement an inclusive higher educational environment, in this study I have planned to discuss in a comparative perspective the relevant legal provisions

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36 Factor analysis, Varimax rotation, the three factors together explain 82.2%, KMO=0.884.
and students attitude towards special needs peer in two states: Hungary and Romania. Analysing the equity related regulations in higher education I reached the conclusion that the situation in the two countries is rather different, but has the same problems: low income, marginalised living area, disability, cumulated disadvantages background, both referring to nationality and foreigner students also. The present-day Romanian legal framework is concentrating mostly on securing the right to basic services for special groups and is less preoccupied to build up specific needs orientated inclusive mechanisms. The Hungarian legal regulations are developing continuously since 1993 and are using clearly defined concepts, being characterized by a compensational practice in more than one direction. At the same time in none of the two countries is set up a monitoring system to the benefit of students belonging to special groups.

The research tried to reveal what means of support non-traditional students, confronting the policy conceptions with the students’ perception. Based on the policy analysis, the supporting attitude was measured on three dimensions: acceptance of the nonfinancial/financial support, and personal contact, considering also the intensity of the relation.

In connection with student attitude towards special peer groups, I started from the hypothesis that the students’ way of looking at their mates with special needs is not homogeneous and the different groups are seen differently: students are inclined to think about various special groups in different terms and apply different social closeness/distances to them. In this regard there are also significant country related differences. During the empirical research I studied two different databases which confirmed my hypothesis. Moreover, I found that in regard with all analysed dimensions students from Romania have a more supportive attitude towards their fellow students with special needs compared to their peers from Hungary. It was confirmed that student perceptions have any latent structure: internal ethnic difference, economic disadvantage/disabilities and the foreign factors form the attitude structure. The situation reflects in fact the two different interpretations of the ‘Roma problem’ in Central-Eastern European countries: one which sustains that Roma are a national and cultural minority, and the other saying they are a social group with cumulative socio-economic disadvantages (Forray R. and Kozma 2013).

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Learning Regions in Hungary (LeaRn) – The Dimension of Non-formal Learning

Edina Markus & Erika Juhasz

Presented: European Conference on Educational Research 2017

Proposal Information

Learning Regions in Hungary as a research projects aims to describe communities, territories and regions that can be called the spatial centres of learning. The aim of the research is to explore and analyse the economic, political, and cultural that contribute to the creation of a learning region; to identify, describe, and compare the regional units as learning communities as well as their cooperation as future "learning regions" (Kozma et al, 2016). We analysed the establishment, organisation and development of learning regions by four dimensions: venues of formal education, systems of vocational training and non-vocational adult education, forms of cultural learning and communal activities.

The project has some antecedents, including various endeavours to evaluate ‘the spatial structure of social learning’ (Erdei et al, 2011). The LeaRn Project was modelled on the Canadian Composite Learning Index (Canadian Council of Learning, 2010), European Lifelong Learning Index (Hoskins et al, 2010) and the German Atlas of Learning (Schoof et al, 2011). Recent research tried to describe the territorial emergence of ‘learning regions’ and ‘learning cities’. The LeaRn presents the regional distribution of the statistics of lifelong learning which completes the traditional ‘distribution of knowledge’ in Hungary and may contribute to a more equitable view of the different territories of the country.

Goal of this research is to reveal situation of Hungarian non-vocational adult education. Non-formal learning covers a wide field of learning outside the school system. It does not
mean only vocational education, but several type of general education forms (eg. competence developing courses, hobby courses).

Non-formal learning has various definitions. In an international context, its key document is the Memorandum on Lifelong Learning. The notion by all means refers to organised learning taking place outside the framework of schools. The major interpretational problem here is locating vocational trainings outside the school system. According to the most often quoted definition differentiating between formal and non-formal training/learning.

The contents of non-formal training can be very diverse, in accordance with the contents of the trainings in the same category. Partly based on theoretical considerations and partly on research on the precedents, we examine non-formal training emphatically from the aspect of the labour market. Even though we are aware that it has components which cannot be directly linked to labour market efficiency – as vocational training also has social, region developmental, etc. functions as well –, but at the same time we know partially from previous Hungarian surveys (Györgyi, 2003; Torok, 2006) that participation in vocational training (in Hungary) is basically aimed at keeping or improving a position on the labour market. Based on the European Union’s national reports on education (Eurydice) it can again be outlined that – perhaps with the exception of a few countries (such as Sweden) – adult education is interpreted partly (to a smaller extent) as adult education in a school framework, and partly as non-formal training providing professional knowledge. The interconnections of learning and the labour market is a central question also in the case of OECD, Educational at a Glance, an annual statistical publication focusing on education, represents this view with a wide range of indicators.

Non-formal training has gained a special significance with the increase in need for lifelong learning. The latter notion articulates a general need for adult learning, or more precisely, learning from a position already on the labour market, which is connected to employment on the labour market and – resulting from the age of the person in question – own family background. Thus, the chances of taking part in formal education are small, and this necessarily brings to the forefront kinds of learning taking place within non-formal frameworks.

**Methods**

Our study presents partial results of this multi-component-research. Re-analysing the existing national databases and registrations. The statistical indicator of non-formal learning can be difficult to catch, because they cannot be classified into a unified system, like ISCED in the education system. Despite of it, we have many indicators of non-formal learning. In Hungary there is a data collection system, called OSAP 1665, which gives us relatively reliable data, so we can use relevant indicators to describe our non-formal learning system and its functioning. This chapter is about our indicators: which and why
they were used, and what do they show us. We know, eg.: how many people took part in it, how many courses started, how much they were etc.

When creating the index we used 5 figures. A part of these was connected to the situation of the system of adult education institutions (and its proportion to 1000 inhabitants). By using the data from NIVE we examined the number of adult education institutions and accredited adult education programmes to 1000 residents. The other group of indices referred to the participants of adult education. On the basis of OSAP 1665’s data we analyse the proportion of those completing their training to the total population and to those enrolled. We deemed it important to involve in the analysis the examination of financing of the trainings, to highlight the motivation of learning, thus the proportion of people participating in trainings supported and not supported was also analysed. We experienced significant difficulties in the location of individual/corporate and subsidised trainings.

**Conclusion**

As in terms of economic development and adult education institutions and programs offered by regional differences also appear. However, often, against all expectations, the opposite sign. On the more disadvantaged areas is higher than the number of institutions and the number of accredited programs. This may be due to the replacement function of adult education can succeed. It probably is able to prevail because the European Union funds come in these areas will allow the training and institutional development.

Non-formal learning – partly referring to course trainings for adults, but mainly meaning work-based learning – emphatically enriches our earlier picture of the learning regions (the indicators of formal learning). Work-based non-formal learning is usually condensed in an industrial centre, or places where there is a special cultural capital available. Courses and other kinds of learning are located in a more even way in space (they can be organised in settlements of varying sizes and having different features). The more even localisation of course-based and other types of learning can be one of the explanations why different regions can or cannot evolve as learning regions in Hungary.

It presents the background to empirical analysis of the Hungarian regions from the point of learning as a social activity. This endeavour is rooted in educational research. The LeaRn Project, however, is the first attempt to develop a Map of Learning – a cartographical presentation of learning as a social activity. As such, the initiative may be viewed as a contribution to the European Lifelong Index (ELLI) and a new approach to establishing the Map of Knowledge in Hungary.

**Keywords:** non-formal learning, lifelong learning, learning regions, adult education
References


Tablet Supported Education in a Hungarian Primary School: Results of Students and Teachers

Balazs Czekman

Presented: European Conference on Educational Research 2017

Proposal Information

The Horizon Report in 2010 published by the researchers and educational technology experts of NMC (New Media Consortium) predicted the emerge of mobile technology in education within one year. On the word of the predicted trend the mobile devices (e.g. laptop, smartphone, tablet, e-book reader, portable and wearable smart devices) have expanded not only in everyday life and in the households but also in the education both in Hungary and at international level. As a Hungarian research shows 83 per cent of the primary school pupils owns a smartphone, more than 50 per cent of them owns a tablet, which is followed by the laptop (47 per cent) and the desktop computer (37 per cent) (DIA, 2016). The arise of the information and communication technologies in education is confirmed by international (Clarke et al., 2014; Fabian–Maclean, 2013; Mares, 2012) as well as Hungarian researches (Abonyi-Toth – Turcsanyi-Szabo, 2015; Kis-Toth – Borbas – Karpati, 2014; Racsko – Herzog, 2015). Beside the devices mainly used for frontal methods (e.g. smartboard) more and more mobile educational devices take their places in the classroom making the 1:1 access model (one device per student) possible. Amongst them the tablet has an important role due to its size, long-lasting battery and intuitive user interface (Mares, 2012). Because of these characteristics the international researches also reveal that the testing of the tablets in educational surrounding has already begun from European countries through the USA, Asia, India, Australia to South-Korea (Clarke et al., 2013). In parallel with the international tendency several Hungarian educational institutions started to use tablets from kindergarten up to higher education; there have been some initiatives which both apply and research the new technology as well as the 1:1 access model in educational settings since 2011. Despite of the growing number of the schools implementing tablets in Hungary several years of delay can be observed in comparison with the global situation. The initiatives, which are accompanied

39 University of Debrecen, Debrecen (Hungary), Email address: balazs.czekman@gmail.com, ORCID: 0000-0002-1515-7129
with scientific researches, are mainly launched by multinational companies (CSR programs), higher educational institutions and individual schools as pilot projects. However, the low number of the Hungarian researches raises some questions in connection with the possibilities of implementation and primarily the effectiveness of the tablet. The possible and necessary researches may examine the students and teachers attitude, the frequency and way of using the tablet, the effectiveness of the learning outcomes and the different possibilities using it as an assessment tool.

According to the above mentioned types of initiatives, our research as a part of a pilot project was organized in a primary school in Budapest, Hungary. The two-year-long “Tablet supported education” project started to use tablets in class work in September 2015 after one year of preparation and planning. In general neither the school management, nor the teachers and the pupils had any particular experiences with the utilization of ICT during lessons. The project launched with 18 tablets in four classes in the first (age 6-7, ISCED 2011 level 1) and fifth grade (age 10-11, ISCED 2011 level 2).

Methods

Our research goal was to examine the acceptance of the new device within educational setting, and also to investigate the possibilities of its implementation in primary school, therefore we researched the attitudes and the usage profile of the mobile device. We were curious about how the mobile devices could be utilized in the school lessons, and how the attitude towards the tablets and the applied methods would change or whether not at all during one school year. We hypothesized that (1) the tablet usage during lessons can increase the motivation of the students, (2) the tablet usage during lessons can help the learning process, (3) the tablets can help the teachers to reach their pedagogical goals easier and (4) as time goes the positive attitude toward the devices will decrease because of the „novelty factor”. Our research questions were keen on (1) what advantages the teachers experience using tablets in education, (2) what challenges the teachers experience using tablets in education, and (3) how much extra time teachers need for preparing a tablet supported lesson.

Our attitude and usage profile research was accomplished on a full sample; all the pupils (lower primary students: n=28; upper primary students: n=37) and all the teachers (n=12) in the pilot project were involved. The one-year-long longitudinal research applied multiple data gathering so finally we received 153 from the lower primary, 317 from the upper primary students and 174 questionnaires from the teachers. We used questionnaires amongst the pupils, questionnaires and semi-structured interviews amongst the teachers as data gathering instruments. The paper-based questionnaire had two different graphical design for the first and the fifth graders. Similarly, two separated questionnaires were used amongst the teachers; one to fill out after every tablet supported lesson and the other one to fill out continuously. The pupil survey used a three-point while the teachers’ ones used a ten-point Likert scale. There were 2-3 measurements in a month for the pupils after the tablet supported lessons. The statistical
analysis of the data was executed with the SPSS 22.0 SPSS data mining and statistical analysis software. During the statistical analysis we examined frequencies, and we also used crosstabs and ANOVA. The results of the interviews amongst the teachers were separated into two categories, pros and cons of using tablets in education.

**Conclusion**

The results of the research are based on 174 tablet supported lessons, from which 67 were held in lower primary, 107 were held in upper primary. The research amongst the pupils were positive; on the basis of the feedback the 89,5 per cent of the lower primary students and 91,8 per cent of the upper primary students felt themselves “very well” during lessons, while the “in between” and “not really” categories remained at a low level. The attitude towards the new device was also positive, as the 88,2 per cent of the lower primary and 86,4 per cent of the upper primary students “enjoyed that they could use tablets”. Amongst the upper primary students the self-reported results show that the tablet helped their learning “very much” (86 per cent), “half way” (10 per cent) and “not really” (3 per cent). On the basis of this question we examined the “novelty effect” longitudinally; though it showed a significant result (p=0.008), it didn’t reflect any tendency. The teachers were satisfied with their results as more than three quarters of them “reached their pedagogical goals” at between 90 and 100 per cent, while 85 per cent of them replied that “the tablets helped them to reach their pedagogical goals” at a high level (90-100 per cent). The semi-structured interviews revealed numerous positive effects of the tablet supported education, however it showed some challenges also, which were mainly based on the lack of infrastructure (e.g. Wi-Fi).

The research presented above is the fundamental step into the direction of our future examinations. These future examinations are pointing towards the effectiveness of the tablet supported education in primary school, investigating the learning outcomes by different subjects. We are planning to observe the change of different skills and competencies by using experimental research, applying PPC research model.

**Keywords:** ICT, mobile technology, tablet, education, primary school

**References**


School Effect in Different Sectors of Education

Katinka Bacskai

Presented: European Conference on Educational Research 2017

Proposal Information

After the political transition in the 1990s, several parochial schools started to operate in Hungary. In the era of communism, only five parochial schools were tolerated. After the fall of communism in 1989, a number of new parochial schools were established. Consequently, nowadays there are almost 1000 parochial schools. It is a very significant change, a totally new situation, new actors appeared around these new schools.

It has long been known that school context is an influential component of the school system, but its dimensions and the way to measure them have not been identified yet. It is almost a commonplace among researchers of education that there was a paradigm shift between the Coleman Report of 1966 and the McKinsey Report of 2007. The Coleman report proved the very strong connection between family background and achievement at school. According to the simplified interpretation of Coleman’s views, school and teaching do not matter as it is in the social composition of the school that influences achievement. In contrast, the McKinsey Report, which was based on qualitative and quantitative research of the twenty education systems that produced the best PISA results, pointed out that the performance of an education system is guaranteed by the excellence of its teachers. In the world’s most successful education systems teachers are very well qualified and held in high esteem, but as a precondition, the teaching career is highly selective, and teachers are frequently and regularly evaluated (Moursched et al 2010). In spite of the issues above, according to education research based on the theory of reproduction, the success of one’s educational career is essentially determined by one’s family background, and schools are hardly able to modify that predictable path. However, the relationship-network based approach has brought schools back into analyses of...
student achievement. In our research we also try to establish which school characteristics increase, and which of them decrease, and also the possibility of achievement.

Non-public schools are registered to be more effective in Europe. This research is primarily attributed to Jaap Dronkers and his research fellows, who remind us of the intersectoral differences and the necessity of their further analysis (Dronkers and Hemsing 1999; Dronkers 2004; Dronkers and Robert 2004; Dronkers and Avram 2009). They found that the PISA scores of pupils studying in government-aided (mostly parochial) non-public schools were higher than those who study in other sectors. This result is also verified in Central Europe by analysing the PISA 2009 database. The analyses pointed out that can be observed in Slovakia and Hungary intersectoral differences written in the secondary literature on the advantage of the parochial sector. We also realised that in the parochial sector, the determining power of social background is more moderate than in the public sector (Pusztai – Bacskaı 2015). But the question is: whether this efficiency valid in this new situation?

It was during the study of the differences between students’ performance in different school sectors (state, private, denominational) that our attention was drawn to school effect (Pusztai 2006; Pusztai 2015; Pusztai–Bacskaı 2015). We found out that favourable reproductive determinisms that benefit high-status students do not work in the same way in the different school sectors. The study of school communities revealed that the composition and density of students’ and parents’ relationship networks as well as the institutions’ contribution to their formation and consolidation decrease the inequalities rooted in the differences in students’ social backgrounds. In other words, even low-status students achieve better in such an environment. After James Coleman (1966, 1990) and his followers, we used the term school social capital for the phenomenon above, and having examined several existing definitions of social capital we returned to Coleman’s original concept (Pusztai 2009, Lauglo 2010).

Our intersectoral comparisons have led us to the conclusion that the power of institutional social capital to compensate for reproductive determinisms is independent from school sectors. Instead, it depends on the system of school activities based on the teaching staff’s view of the profession and their educational values, some elements of which we have already identified (Pusztai 2009). We have also pointed out that with the support of the capital of the teaching staff teachers can convey their cultural and human capital more effectively to their students from culturally disadvantaged backgrounds (Leana, 2010, Bacskaı 2015).

Methods

In our presentation we analyse the efficiency of the public and parochial schools in Hungary. We rely on two databases. Firstly, the PISA 2012 Organized by the OECD, PISA (Programme for International Student Assessment). Secondly the Hungarian Competence Assessment (between 2013 and 2015). The PISA survey evaluates the academic
performance of 15 year-old pupils in the areas of reading, mathematics and science, who in most of the analysed education systems, are approaching their school-leaving age, so it is a momentary research. The Hungarian Competence Assessment also examines reading and mathematics skills during primary and secondary education in every year. Every pupil and school has an identification number and with this ID we can follow the changes of the effectiveness.

Using data from the National Competency Assessment as well as from our own databases in the first phase, by comparing the results of the National Competency Assessment (the 2013 database of 8th-year students and the 2015 database of 10th-year students), we intend to test different value-added models to choose the one for our research that controls student status in the broadest sense.

It will be selected the schools for our sample on the basis of test results and student composition (NCA) from the denominational and non-denominational sectors: 15-15 schools which accumulate disadvantages (with value added in the lowest third) and 15-15 schools which compensate for disadvantages (with value added in the upper third) (Saunders 1999).

Our assumption is that the achievement of schools both in the short and long term alike depends on the integrity of the teaching staff on the one hand, and the integrity of the entire school life on the other. Our research has shown that students succeeded well in schools where there is close professional cooperation within the teaching staff (Bacskai 2015), school heads set goals effectively and there is a strong consensus on values among the clients of the school (Pusztai 2009).

We assume that denominational and non-denominational schools have different sets of goals, although the difference is diminishing because of the rapid expansion of denominational education. Our earlier findings show that there is a strong value consensus among parents, teachers and students in denominational schools, which serves as a source of social capital that gives efficient support to school achievement (Bryk & Schneider 2002; Pusztai 2009). We hold the view that the same impact of social capital can evolve and improve short and long-term achievement in non-denominational schools as well. Likewise, one can assume that a denominational school without value consensus lacks this resource.

**Conclusion**

Our expected outcomes are at different levels. Among the possible basic research outcomes, the following three are the most important: (1) Firstly, my research is related to a new scientific model inasmuch as its theoretical foundation is the interpretation of the concept of institutional effect in the research of education. (2) Secondly, critical revision of the concept of student achievement in education may open up a new perspective. It may help reveal the shortcomings of currently used concepts of student
achievement, especially their failure to formulate a consistent and independent theory of education. Instead, they turn to other disciplines and borrow concepts that reflect the influence of factors outside the education system, are short-sighted, one-dimensional or very narrow in scope and insensitive to the diversity of the student population. It would be a great opportunity for us to have our share in the development of a complex concept of student achievement and in the improvement of the efficiency of higher education. (3) Thirdly, we intend to measure the institutional effects with a complex set of instruments combined, in a comparative and complementary way, the use of self-developed ones that are sensitive to our cross-border circumstances and the ones applied in international research.

The expected practical outcomes are also manifold: (1) It is our priority to make our findings accessible for Hungarian and foreign researchers alike, therefore they will be published continuously in reviewed international and Hungarian journals and also presented at noted international and Hungarian conferences. We plan to summarize the basic research outcomes in comprehensive volumes (one in English) and apart from the professional public, we intend to make them known to experts working in educational politics. (2) Low SES students' success is a priority in educational policy. As a prospective outcome of our project, institutions may find their resources that promote low SES students' retention and success. Since education will probably face still wider participation and growing diversity with increasing heterogeneity of students, our research findings can contribute to the improvement of institutional policies and identify special challenges of institutional missions.

**Keywords:** school sectors, school performance, low SES schools

**References**


Teacher training plays an important role in higher education, but the prestige of teaching profession has dramatically dropped during the latest decades. The question is that what the reasons are for the fact that students from the richer family background and with better grades do not choose education-related courses.

The book was published by Teacher Education Students Survey in Central and Eastern Europe (TESCEE) and SZAKTARNET project coordinated by CHERD Hungary in 2015. The volume shows and summarises the results of a comprehensive research. It describes the social position of teachers-to-be both in the North Great Plain Region of Hungary and in the cross-border area of Debrecen University. They attempted to answer the following questions: What was the society of students in the region in 2015? Who are the potential teachers?

The publication includes three major parts. The basic concept described comprehensively by Gabriella Pusztai and Timea Cegledi in the introduction of the book is the situation of the students and the prestige of teacher training in Eastern and Central Europe.

The first chapter presents the challenges of teacher training in the Carpathian basin. It provides an insight into the teacher training in the ex-Hungarian, annexed territories under the control of another state in the framework of this chapter. The authors, Iren Gabrity Molnar and Zoltan Takacs focus on the implementation of mother-language teacher training in the Serbian-Hungarian border region and draw the attention to the specific role of the Hungarian minority education in their study, Higher Education and Teacher Training in Hungarian in Vojvodina. Gabriella Stark gave the following title to her study: Minority Learning Paths in the Teacher Training in Hungarian in Romania. The author shows the system of the cross-border teacher training in the framework of the
Hungarian teacher training in Romania. Rita Pletl examines the relationship between the mother tongue and the national language by means of questionnaires in her study (The Relationship between the Mother Language the Classroom Language and the National Language in Hungarian Vocational Training in Romania). The author does not focus only on the teacher training: her target groups are students, school-leavers from secondary schools, and teachers working in vocational education in Hungary. As a result of the research, it can be stated that the Hungarian educational participants in Romania highlight the importance of mother-tongue education; however, they consider that learning Romanian terminology is also necessary. The study of Ildiko Orosz, Transcarpathian Teacher Training in Hungarian, describes the opportunities of Transcarpathian Hungarians for further education, limited to the Transcarpathian teacher training in Hungarian. The author examines the effect of Bologna Process on the Transcarpathian higher education in Hungary and the opportunities of the Hungarian Minorities. The main problem is the introduction of uniform entry system, which tends to make the higher education Ukrainian-like. Katinka Bacskaï, Tünde Morvai and Julia Csano gave the following title to their study: Development and Competition, Teacher Training in Hungarian in Slovakia. The authors describe the legal framework of teacher training in Slovakia and the changes after the signing of the Bologna Declaration. The study presents currently operating higher education institutions in Hungary. At the end of the study, we are given a brief summary of the opportunities of the graduate students in the labour market. The study of Zsuzsanna Markus differs from the studies mentioned above because her research is not limited to a cross-border region. The study based on the results of a questionnaire which takes a comprehensive view of the situation of teachers-to-be in the majority and minority higher education in the Carpathian basin. The author examines the social backgrounds, the career choice motivations and future pedagogical goals of the students from the Hungarian and cross-border catchment area of Debrecen University. Imre Fenyo’s study, The First Workshop of Teacher Training at Debrecen University; Teacher Trainees in the Practice Schools 1930-1949 is a historical study, that describes the practical experiences of teacher training from 1914 to 1949. The work takes an insight into the duties and responsibilities of students in the changing legal framework and draws the readers’ attention to the importance of the vocational school that is essential in teacher training. The study of Judit Osváth, The life of Hungarian Catholic teacher trainees at the Majlath-group in Cluj-Napoca between the two World Wars, intended to present the life of Hungarian students based on archival sources.

The editors of the first chapter give a detailed and comprehensive overview of the situation of higher education in Hungarian in the Carpathian Basin. With this help, we can compare the higher education system of the Hungarian minorities in different countries. As a result of studies, we can state that higher education in Hungarian of every annexed territory and the Hungarian minorities are facing similar difficulties apart from their geographical location.
The second chapter attempts to answer the following question: Who will be the teachers of the next generation? It is based on an investigation carried out by Teacher Education Students Survey in Central and Eastern Europe (TESCEE), SZAKTARNET project and CHERD Hungary. This part summarises the results of the empirical research. The chapter is unique in its topic concerning its data abundance: the questionnaire-based survey was carried out with 1792 students in five countries. The competent analysis of the results has scientific importance. The excellent authors present significant issues of teacher training in the North Great Plain Region of Hungary, in Partium, Szekely land, middle Transylvania of Romania, in Transcarpathia of Ukraine and in Vojvodina of Serbia and Upper Hungary of Slovakia.

It also reveals the professional orientation of Majority and Minority students based on a questionnaire carried out in two phases by students of University of Debrecen, University of Nyiregyhaza, Debrecen Reformed Theological University, Faculty of Psychology and Educational Sciences of Babes-Bolyai University, and the Extension of Babes-Bolyai University in Odorheiu Secuiesc (Szekelyudvarhely), Partium Christian University, University of Oradea, Ferenc Rakoczi II Transcarpathian Hungarian Institute, University of Ungvar, University of Munkacs, Sapientia Hungarian University of Transylvania, University of Novi Sad.

![Figure 1: The institutions involved in the investigation (TESCEE)](image)

Source: The authors' own draft

The authors provide detailed statistical results and show them in a well-designed framework with the means of readable graphs; charts and maps of the SPSS statistical
Timea Cegledi deals with the relationship between higher education and social inequality. She compared high-performing students with the disadvantaged family background to students having similar performance with a favourable background i.e. the Winners, to worse performing students with a similar background i.e. the Drifters, and to underperformers with a favourable background i.e. the Neutrals. These results are unique because disadvantage can be compensated with the exploration of disadvantage.

Gabriella Pusztai gives a detailed picture of the differences between religious and non-religious students. It can be stated more religious students choose the teacher profession in the cross-border region of Ukraine, Romania and Hungary according to the questionnaire carried out in Partium. Roland Hegedus deals with catchment areas in the Eastern-Hungarian teacher training. The author draws particular attention to the career-choice of full-time and correspondence students. Judit Kerulo highlights the prestige of teacher profession based on different dimensions. She points out that the social background of teacher trainees is not lower than other students' background. Klara Kovacs deals with the teacher trainees’ free-time activities and state of health. She promotes the idea that social and sports activities have a good effect on students, they contribute to their self-actualization and help to find the meaning of their life. Hajnalka Fenyes describes the role and types of teacher trainees' voluntary work in her study. Hypotheses are supported by empirical research results based on cross-tabulation, logistics regressions and cluster analyses. Agnes Engler shows the relationship between private life and career by means of literary background and questionnaires. The hypothesis was proved according to which the students who are living in stable relationship and raising their children are the most successful in career-building. Reka Agnes Dusa shows the international educational mobility plans of teacher trainees by summarising the results of her research. It can be concluded that more teacher trainees take part in foreign student programmes than other students, but the author calls the readers' attention to the fact that most of the teacher trainees are students of languages, they can acquire skills necessary to speak foreign languages by mobility. The authors of the chapter give a detailed picture from different points of view about teacher education of the examined countries and the motivations, career-choice, habits, religious attitudes and mobility of the students. The reader can have an insight into the recent issues of teacher training in different countries.

The third chapter of publication, Preparing for the Profession provides an overview of main aspects of the professional development, the effective methods of teacher training, effects of orientations of students and the concepts of their profession. Mihaly Fonai describes the profession of law students and teacher trainees with the help of different arguments. The study of Veronika Bocsi, Laura Morvai and Anita Csokai examines the values of teacher trainees' child-pedagogy. The authors describe the theoretical background of the values of child-pedagogy excitingly. The fact they describe the teacher trainees’ preference system by means of student survey increases the level of the study. Balazs Jozsef Fejes, Norbert Szucs and Valeria Kelemen reveal the compensation
possibilities of students with disadvantaged background by means of the mentor programme. Ibolya Markoczi Revak and Edina Malmos tended to reveal learning and educational-methodological deficiencies deriving from the knowledge structures of biology majors by using phenomenography. Tunde Barabasi shows the learning attitudes and teaching perspectives of teachers-to-be by means student questionnaires. Maria Csernoch examines the changes of the subjects due to the digital world, curriculum requirements, IT teaching based on new programme and digital competence development and their effects on students and teachers. Zoltan Nagy examines the mother-language attitudes in higher education and tries to answer what is the role of dialects in teacher training or if it is permission for teachers to use in the classroom. The survey was done with other students and taking gender differences into consideration they compared the results with the opinion of teacher trainees’ dialects used in the classroom. Tamas Vincze tries to attempt to show the technical language use of teachers-to-be with the help of terminology used in the end-term test as portfolios by PhD students.

The presented volume is a unique study, that largely contributes to know the commitment of teacher trainees in North-Eastern Hungary and in its catchment cross-border region and last but not least to the presentation of teachers-to-be society in our region. The results of the detailed survey contribute to the further research. One of the additional merits of this publication that this study was published in English: Professional Calling in Higher Education: Challenges of Teacher Education in the Carpathian Basin. The volume consists of readable, useful and up-to-date studies which are worth reading by every present teachers and teachers-to-be, students and experts of human subjects.
In her work called Student dimensions – The mature students of higher education, Agnes Engler presents mature part-time students who study in higher education in a non-traditional form, in two different dimensions. First, she looks at the students’ academic results, and then she explores the academic process from the aspects of private life, career path and learning path. This collection of studies provides a multidimensional picture of mature students to its readers.

It was published in 2014 as part of the CHERD study collection. The research was supported by the Janos Bolyai Research Scholarship of the Hungarian Academy of Sciences. The study also presents results from independent empirical research which was part of the OTKA (K-101867) research led by Prof. Dr. Tamas Kozma entitled Learning Regions in Hungary: From Theories to Realities. The study collection was proofread by Gabriella Pusztai.

In 2013, questionnaire surveys were conducted in three institutions of higher education located in Hungary’s Northern Great Plain region: the University of Debrecen, the College of Nyiregyhaza and the College of Szolnok (as of 1 Jan 2017 the latter two are universities). The full-scale survey was preceded by focus group interviews and structured interviews.

Agnes Engler earned her academic rank at the University of Debrecen in 2010. Her doctoral dissertation was published a year later by Gondolat Publishers with the title Kisgyermekes nok a felsooktatasban [Women bringing up small children in higher education]. From 2006, she was a junior assistant professor, since 2012 she is an assistant professor at the Institute of Educational Studies of the Faculty of Humanities at the University of Debrecen. Her works are published in both Hungarian and foreign journals. She is a permanent participant of several researches as co-researcher, research leader, workgroup leader or project manager.

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This collection of studies contains four parts which deal with the success and the attitudes towards studying, social genders, the interrelationship between studying, work and family, and finally, it respectively describes students from the point of view of educational sociology.

The first chapter explores the motivating forces that motivate mature students to enrol in higher education. Significant forces are the need for professional advancement, the change of profession, interest, social relations, but the pursuit of equal opportunities can also be mentioned. Non-traditional students used to carry negative stigmas because they entered higher education not immediately after leaving secondary school or because their parents weren’t intellectuals. These students are generally older than full-time students, they have professional experience and they expect different things from a university. Pinning down and fulfilling these needs while maintaining the quality of education presented a great challenge for academic institutions.

Looking at life-long learning, Northern countries are on the top the list; based on the figures from Hungary which had an average of 2,5% in 2012, which can be considered a very low figure. Typically, part-time students in Hungary are below 35 years. Although part-time students share some traits most of these diverge, these students do not form a heterogeneous group. It seems that women regard themselves as being more successful; similarly, students in a relationship or those having small children judge their studies successful. There is a correlation between motivating forces and academic success. Students driven by the desire to learn or to have deeper knowledge (internal motivation) are more successful in their studies than those who are driven by the need to prove to their family or to advance in their career. Social relations (both with the tutors and fellow students) correlate positively with academic achievement; however, it is not as decisive as in case of full-time students.

The second chapter points out the correlations between gender and studying. 1092 students took part in the survey, 70% of them were women, and also 70% of the participants had a partner. The high participation rate of the women is a good indicator of the results of academic expansion. Students (typically women) delayed their studies due to family reasons or starting to have a family; others were dissuaded by experiences in secondary school. The results of the Hungarian Graduate Survey 2010 show that the majority of those who hold more degrees are women. There is also a difference between courses: women tend to choose arts and humanities or law courses; whereas men prefer engineering courses. Although women are more motivated, men are still more successful among mature students. There are also differences regarding the education level of the parents: men usually have better-qualified parents and they come from bigger cities. In contrast, women are more determined; they prepare more for exams and are better regarding meeting deadlines.

In the third part, the author collates a research based on several databases and which is more significant from a social and gender point of view. She examines the opportunities
and challenges of higher education from the perspective of students, employees and parents, focussing mainly on the education path of students with families. With the help of the Hungarian Graduate Survey 2010’s database, she analyses the academic success of the correspondence students against family status. There is probably no doubt about the fact that study environment and academic success are connected; also there can be little doubt that mature students require more flexibility and more concrete information than their full-time peers. By analysing the Learning Regions in Hungary regional study, the author was trying to find out what kind of education paths students had and what difficulties they had during their studies. Her results pointed out that in praxis alternative education paths are relegated to the background in the academic institutions. Reconciling studying, family and work poses several difficulties during the student years. Overcoming these difficulties depends greatly on the student’s personal environment. Despite these difficulties, students with families can be considered as successful, comparing them to students who were single as they yielded unexpected results. Still, universities and colleges are not flexible enough for mature students. This is indicated by – amongst other factors – the level of cooperation with fellow students, which showed a significant difference between successful and less successful mature students; whereas this difference was minimal regarding the contact with tutors. Less successful students also have discernibly more difficulties with administrative affairs, acquiring books and getting time off work to study; whereas more successful students would be more interested in attending full-time lessons, academic days and conferences. This means that higher education cannot cater to the needs of students working in set hours: student administration offices, tutors’ office hours and library opening times are restricted to during the day. The needs of mature age students with more flexible daily schedules willing to explore more opportunities are also left unfulfilled.

Looking at female and male students’ plans for private life, the author saw nearly no difference. Less than 5% wish not to marry at all, and both sexes think that marriage and having children are timely following a few years spent working and having found a suitable partner. Pursuing a career is more influential for men, although the difference is not substantially significant. Agnes Engler’s large sample surveys confirm that plans for starting a family change the latter stages of life when having only one child instead of the originally planned two or three becomes preferable.

An important part of the study is the issue of women with small children pursuing post-secondary education. The author had previously investigated this topic and this research further confirms that when deciding to enter post-secondary education the main motivation for 95% of female students with small children is to find a job easier or to retain their position at their workplace, but the wish for career advancement was also visible. In a second survey, the author looked at students’ entry into the labour market and the investment in education showed positive results. Two-thirds of the surveyed students managed to fill better positions following graduation, but the index of success was also positive for the remaining one third. Therefore, young mothers’ pursuit of post-
secondary education clearly shows positive indexes. However, the fact that during the years of childcare they were exempt from tuition fees must be highlighted; only 42% of those would have agreed to pay tuition fee.

A noteworthy benefit of the research of mature students is that it reveals the nature of the connection between success and family status. Although the basic hypothesis continuously was that students who work and have families have less time to study and are consequently less successful than those who do not have families, the contrary proved to be true. Literature cited by Engler presumes that the skills acquired while managing a family are carried over to manage studies and later work. Some countries are already making efforts to acknowledge such competences in some form. Do these research results confirm the validity of such efforts?

Reviewed by Katalin Cseke

This Book, which was issued in 2010, is a unique one in this topic. The authors are the lecturers of the Subcarpathian Hungarian Institute: Laszlo Braun, Istvan Csernicsko, Jozsef Molnar.

The aim of the book, according to the authors, is to present the absolute numbers of the Subcarpathian gipsy/Romani Communities, as well as the Hungarian-speaking gipsy/Romani communities, their role in the long-term sustainability of the network of Hungarian speaking schools and the attitude of the Subcarpathian Hungarian communities to the Hungarian speaking Romani community.

The book consists of four major chapters. The first one discusses the demographic situation of the Subcarpathian Romani people. It analyses the data from the only census of the independent Ukraine so far, conducted in 2001. Here we can find out that 0.1% of the overall population of the country admitted themselves as being of Romani nationality. There are only two regions where the number of the Romani people exceeds 1% of the population - in Odessa region and in Subcarpathia. In this chapter, we can also find data from previous censuses, as well as some information on the Romani population in Europe and the Carpathian Basin. A significant part of the chapter discusses the territorial distribution of the Romani people. According to this, 29.4% of the Ukrainian Romani people live in Subcarpathia. Inside Subcarpathia, the majority of them live in the four districts where the majority of the Subcarpathian Hungarian population lives (Berehove, Uzhgorod, Mukachevo, Vynohradiv).

The authors point out that in several cases the census data does not reflect on the actual situation, so they made their own calculations as well.

The second major chapter concentrates on the education. A very important question is formulated here: whether the situation of the Romani people is a social or educational problem. The authors present the situation of the Romani people in the system of the

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Subcarpathian Hungarian schools, as well as the circumstances of their education. In the academic year 2008/2009, there were 693 active schools in the region, 21% of them had gipsy students too. According to the data of the 2001 census, more than 4% of the primary and secondary school students have a Romani origin. When it comes to the education of the Romani children, there is still no consensus about their education whether they should be educated in homogeneous or heterogeneous classes. According to many experts, the experience of the Romani educational program, which is carried out by the Reformed Church and the Hungarian speaking gipsy schools in Berehove and Mukachevo, emphasise the importance of the education in homogeneous classes. However, we are convinced that the children have to be provided with an opportunity to choose between the two options.

In the Subcarpathian schools, literally, no information is provided for the Romani children in their native language and about their native language and culture. This is also true for the Hungarian-speaking schools. The main reason is that who work in these Hungarian-speaking schools have no information, no knowledge of the languages, culture and social model of the gipsies. The drop-out rate among the Romani students is extremely high (51%). Also, this social group has the lowest number of people with a higher education (0,003%).

A brief chapter of the book is dedicated to the programs of the Subcarpathian Hungarian social organisations and churches. Both the Roman Catholic and the Reformed church have Romani programs, which are basically aimed at extra-curricular education. Apart from the churches, the Hungarian social, political and professional organizations, institutions do not have any programs aimed particularly at the Romani people.

The last part is dedicated to the attitude towards the gipsies: the Ukrainian and Subcarpathian society, including the Hungarian community, having a really negative attitude towards them. Unfavourable prejudice and negative stereotypes are very wide when it comes to the Romani population. According to the authors, these claims are based on the findings of their own and other Ukrainian researches. The first research presented on the topic was the survey conducted by the Institute of Sociology of the Ukrainian National Scientific Academy and the Democratic Initiatives Foundation between 1994 and 2005, which shows the fact that the inhabitants of the country are eager to accept the gipsies only as tourists who visit Ukraine. However, 42.1% of the 1800 people who took part in the survey wouldn’t even let the gipsies into the country. The survey conducted between 2001 and 2006 in Subcarpathia had very similar results.

The aim of the book is not to provide a detailed and complete description of the Romani situation in Subcarpathia, neither does it analyse the situation of the Hungarian speaking Romani people in the region. The main aim of the book is to draw attention to a question, which has not so far been discussed by Subcarpathian politicians, educational experts and researchers - the situation of the mostly Hungarian-speaking Romani community, which lives in the neighbourhood of the Hungarian communities and the various aspects of the
lives of these communities together. Also, the conclusion of the book is not formulated permanently. Instead of a conclusion the authors merely summarize all the findings, and if the questions raised by them will result in new research or interest from organizations and institutions, and then the book will have reached its objective. The names of the authors and the fact that they come from different scientific fields indicate the thoroughness of the research behind the book.
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