## 09 - OPINIONS OF STUDENTS TO THE COEDUCATIONAL PHYSICAL EDUCATION

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## THEORETICALANALYSIS

Coeducation is collective education of student, both girls and boys in one class. Coeducational physical education is known in Slovakia, particularly at primary schools (Obdržálek - Horváthová et al., 2004, The Hague, H. - G. Haag, 2003). Different views and results to a coeducational physical education and many arguments for and against it, opens up an investigation of this issue, particularly in the upper grades. While there were implemented plenty of research in Western Europe to this topic, in Slovakia it is still an unexplored topic (Blessing, 2005; Jackson - Smith, 2000; Tsolidis - Dobson, 2006; Van Essen, 2003).

The number of schools, which are due to the economical or organizational reasons forced to accede to coeducational physical education, is increasing. Although it is a well-known type of process in schools, it is still considered with question marks. The opinion is clearly expressed in gender different curricula in Slovakia.

## THE AIM OF WORK

The aim of the research was to find out the opinions of students from various schools and age categories to the type of physical education they prefer. Whether they would like to attend the physical education coeducational or segregated (single sex). Research is a part of scientific research project VEGA 1/0759/12.

## THE HYPOTHESIS OF WORK

1.We assume that coeducational physical a sport education will be more favourite between girls.
2.We assume that older students will prefer coeducation more than primary school pupils.

## THE TASK OF THE WORK

To find out the opinions of students to the preference of the type of physical and sport education.

## METHODOLOGY

The research was made during the school year 2011/2012 at primary and secondary schools. The number of students as well as schools they attend is shown in first table.

Tab. 1 The number of students in different types of researched schools

| gender | $\begin{aligned} & \text { PS 5- } \\ & 9 \mathrm{~g} . \end{aligned}$ | $\begin{gathered} \text { 8G } \\ \text { gymn. } \\ \text { 1. }- \\ \text { 4.g. } \end{gathered}$ | $\begin{gathered} \text { 8G } \\ \text { gymn. } \\ 5 .- \\ \text { 8.g. } \end{gathered}$ | $\begin{gathered} \text { gymn. } \\ \text { 1. - } \\ \text { 4.g. } \end{gathered}$ | $\begin{aligned} & \text { VS } \\ & \text { 1.- } \\ & \text { 4.g. } \end{aligned}$ | PS together | SS together | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Boys | 323 | 94 | 108 | 209 | 148 | 417 | 465 | 882 |
| Girls | 277 | 123 | 76 | 271 | 318 | 400 | 665 | 1065 |
| Total | 600 | 217 | 184 | 480 | 466 | 817 | 1130 | 1947 |

The questionnaire was used to collect the data. In our research were involved 1947 students of which 817 were from primary schools and 1130 were from secondary schools.

To interpret the data we used mathematical-statistical methods and to find out the statistical significance we used chisquared test.

Abbreviations used in this chapter: b- boys, g- girls, VS- vocational secondary school, PS- primary school, SSsecondary school, gymn.- gymnasium (type of secondary school), 8G- 8 year secondary schooling, 4G- four year secondary schooling, g.- grade, Chi-chi-square test, p -level of significance.

## RESULTS

1947 students responded to the question "How should physical education lessons be organized - segregate or conductional". The high statistical significance was found when comparing opinions of primary school students to student of secondary schools (fig. 1), whether they prefer physical education segregated or coeducated. 77,2 \% of primary school pupils and $61,6 \%$ of secondary school pupils expressed the opinion that physical education should be taught separately. While at secondary schools there are more students for coeducation than at primary schools.

How should physical education lessons be organized?


Fig. 1 Comparison of student's opinions at primary and secondary schools

The other statistically significant result in favour of the segregated physical education was found in a separate comparison of boys and girls at primary and secondary schools (tab. 2). 16\% more boys and girls at secondary schools would prefer coeducational physical and sport education compared them to boys and girls at primary schools. We assume that the cause of the increased popularity of coeducational physical education at secondary schools may be the upper students' age or the puberty and associated interest of the opposite sex. Opinions of eight year secondary schools students (from fifth grade) are included in results of secondary school pupils' opinion. We think that these students increased the percentage of inclining to coeducational physical education, because they know each other longer and have closer relations.

Tab. 2 Statistically significant results of comparison of boys and girls at PS and SS

|  | boys PS - SS (\%) |  | girls PS - SS (\%) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Chi $=23,97^{* * *} \mathrm{p}<0,001$ |  | Chi $=32,85^{* * *} \mathrm{p}<0,001$ |  |  |  |
|  | coeducational | segregated |  | coeducational | segregated |
| PS | 25,7 | 74,3 | PS | 19,8 | 80,2 |
| SS | 41,3 | 58,7 | SS | 36,4 | 63,6 |

Figure 2 shows mentioned preference of coeducational physical education at secondary schools compared it to primary schools. What was not visible in the previous figures and tables is the increase of preference of coeducational physical education with increasing age of girls and boys. The greatest increase of boy's responses at primary school is at the age of 12, girls prefer coeducation as 14 year old. In the case of secondary schools is the increase for coeducational physical and sport education for both genders continuous. More significant increase is in the case of girls, who in 19 years of age prefer coeducation the most, while boys prefer it the sooner, in 18 years.

Fig. 2 Preference of coeducational physical and sport education at PS and SS in given age - boys and girls


Furthermore we were interested in opinions of students in terms of gender separating (fig. 3). Sample of boys and girls answered the question almost the same. More than $2 / 3$ of boys and girls would rather go to segregated physical and sport education. We assume that boys chose a segregated physical education in their answers because they consider girls as a disturbing element during lessons. Girls probably prefer it because they are ashamed to practice before the opposite gender, they are afraid of persiflage, and their sport's performance is not as good as of boys.

How should physical and sport education lessons be organized?


Fig. 3 Comparison of opinions of boys and girls
Interesting and statistically significant are results in table 3, where at both schools primary and secondary, boys are that ones who often answered, they would like to have physical education coeducational, compared them to girls. Preference of coeducational physical education of boys is better visible in figure 4. Boys exceed the preference of coeducation over girls at primary schools as a 12 and 13 years old. At 8 year gymnasium as an 11-13 years old. It is similar at secondary schools, where boys exceed the opinions of coeducational preference above girls at four-year secondary school as 16 and 17 years old.

At vocational secondary school as $15-18$ years old and at eight-year gymnasium at the age of 15 probably with the beginning of puberty, when boys begin to be interested in girls. Thus can be summarized (fig. 4) that boys are those who prefer coeducational physical education, testified by statistically significant results in table 3.

Tab. 3 Statistically significant results of comparison of boys and girls at PS and SS

| PS |  |  | CS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Chi $=4,055^{*} \mathrm{p}<0,05$ |  | $\mathrm{Chi}=2,777\left(^{*}\right) \mathrm{p}<0,10$ |  |  |  |
|  | coeducational | segregated |  | coeducational | segregated |
| boys | 25,7 | 74,3 | boys | 41,3 | 58,7 |
| girls | 19,8 | 80,2 | girls | 36,4 | 63,6 |



Fig. 4 Preference of coeducational physical and sport education in given age at given school - boys and girls

## CONCLUSIONS AND RECOMMENDATIONS

We do recommend coeducational physical education as an alternative of physical education for schools which do not have an option to choice. We even recommend it at schools, where the opportunity and willingness to choose whether to coeducate or to segregate physical education is. We find it as a good type of education especially for girls. It encourages physical activity that is declining today.

Based on the opinions of students to coeducational physical education, will be possible in the future to use this type of education especially in upper grades, which confirmed the results of this chapter.

Coeducational physical education creates by sport activities the natural conditions to adapt boys to girls and girls to boys. They subconsciously learn to cooperate. This type of education is more popular during puberty age with continuous increasing until the end of secondary school.

The new school law is valid from 1.9.2008. We are now at the beginning of transformation, now it is necessary to try new untraditional sports, modernize curricula and also try "old-new" types of learning such as a coeducational physical education in upper grades. In order to be able to choose the best way, best types of education, when time of future creating of education will come.

Finally, we present some recommendations suitable in coeducational physical education:
-We recommend to give the class at the beginning of the school year a "questionnaire of sport activities they prefer" for example the one from Kinanthropology Research Centre from Faculty of Physical Culture UP Olomouc. Teacher will have an idea of sport preferences in the classroom after evaluation of questionnaire. Going closer to the needs of students there is a chance for students to be more actively involved during physical education lessons and to reduce absence at lessons.
-Teachers should integrate the different interesting exercises and innovative methods in lessons. Suitable sports for coeducational physical education could be: yoga, various dance sports, outdoor activities such as cross-country skiing, snowboarding, canoeing, camping and tourism, swimming, baseball, ringo, indiaka, lacrosse, intercross (Liptovská, 2009) softball, badminton (Tarcala, 2009), floorball, ice skating, exercising at the gym, aerobics, sports martial arts, self-defence, ice hockey, frisbee, handball, rugby and pig in the middle. Similar to a game of pig in the middle is Igent (Pavlis, 2011).
-To modify sport rules to achieve greater participation of girls in sports activities.

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