

Gender Dimension of Secondary Vocational Schools in Slovakia – Equality and Inequality De Iure and De Facto

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Abstract

The paper is a partial output of the research project CREdu: gender equality in the environment of secondary vocational schools. Project is carried out by the NGO EsFem with support from Slovak Research and Development Agency under contract No. APVV-0726-07. The project focuses on the analysis of gender inequality in secondary vocational schools in Slovakia with aim to expand the knowledge base on this issue. Secondary vocational school may designate a future career. Gender-specific signals are carried through formal and informal curriculum and have an impact on aspirations and performances of female and male students. We assume that there is a relationship between the school system and gender patterns in the society. The school is a powerful element in the process of gender socialization of children and young people. It plays an important role in reproducing gender inequalities in society. This is done through the reproduction of gender stereotypes in teaching materials, environment and in behavior of she-teachers and he-teachers in schools. The lack of understanding of the gender related issues may cause overlooking of unequal position of women and men in the society. Actual inequalities are often hidden behind formal gender equality guaranteed by the constitution and laws. It is therefore necessary to raise awareness and reflect the asymmetry between men and women in society through scientific gender analysis. The authors analyze the key legislation and gender segregation in the secondary vocational schools in Slovakia with respect to the ongoing reform of education. The first part focuses on the content analysis of the current legislation, opportunities and threats for the gender equality. The first part consist of: the definition of basic legal norms and the structure of the education system in Slovakia; the identification of negative trends in education system; the main topics of the reform of vocational education and related issues; the position of women and men in secondary vocational schools in Slovakia. The second part of the paper focuses on the analysis of gender inequality in Secondary Vocational Schools in Slovakia. Inequality is manifested both in the representation of men and women in pedagogical staff and executive positions, and also on the he-students and she-students level.

The second section thus includes analysis of gender inequality in secondary vocational schools (description of environment, categories of schools, management positions, and cluster analysis of secondary vocational schools). Analysis of the Secondary Vocational Schools environment was carried out by gender audit in which statistical information from the Institute of Information and Education Prognoses as well as from the Secondary Vocational Schools websites were the principal sources of data. The gender blindness of the recent reform of vocational education is the most serious finding of content analysis of the current legislation. The data obtained from gender audit show that gender inequality is the reality in the Slovak secondary vocational school system. It is manifested in higher representation of women in school system, but at the same time in higher number of men in principal positions. The differences are significant in numbers of she-students and he-students in particular fields of study. Also, in terms of he-teachers and she-teachers similar differences, although to a lesser extent, are present among the fields of study. Overall, it can be concluded that in the Slovak secondary vocational school system there exists both vertical (the representation in positions) and horizontal (studying and teaching in particular fields of study) segregation, which may be the cause of unequal opportunities for men and women to be able to be applied at the job market.

Keywords: gender, gender segregation, gender inequality, gender audit, Secondary Vocational School, he-teacher, she-teacher, he-student, she-student

Introduction

Since 1989 secondary vocational schools in Slovakia have gone through significant changes. The gender aspects of these changes and consequences have however not been subject to a deeper scientific inquiry. One of the priorities of the school reform currently in progress is the effective connection of education and practice. The goal of the process of education is to prepare for future employment. Gender disparities and gender segregation on the labour market are one of the continuing problems of Slovak society. Although Slovakia has pledged and declared an interest in resolving the problem of gender segregation of professions, **there is not enough data about the mechanisms causing this segregation, that could contribute to its elimination.** We are convinced that the course of preparation for a future profession is one of the key moments of this process. Therefore we have decided to dedicate considerable research into the state of gender equality and gender division of labor in the environment of secondary vocational schools.

The first part of this paper consist of the definition of basic legal norms and the structure of the education system in Slovakia; the identification of negative trends in the educational system; the main topics of the reform of vocational education and related issues. The second part of the paper presents results of a partial gender analysis of secondary vocational schools. The main goal of the audit was to *broaden the knowledge base about gender (in)equality in the sphere of secondary vocational schools in Slovakia.* This part is divided into three sections. The first section provides a basic description of the environment, categories of schools and numbers. The second part is dedicated to the numbers of men and women in leading positions. The third part introduces a two step cluster analysis of secondary vocational schools. The whole paper is concluded by a third section, where we present our findings.

1. Gender Analysis of Slovak Legislation Concerning Secondary Vocational Schools

In the content analysis of the current legislation concerning secondary vocational schools in Slovakia we have attempted to explore the extent to which the current ruling that constitutes the base of the school system reform in Slovakia, is gender sensitive or if it is gender sensitive at all. We were trying to establish whether this legislation eliminate or - to the contrary – reproduce, or even enforce gender stereotypes between men and women in the teaching profession. In the gender analysis we were focused on the three basic rulings of law, that gradually shape the school system reform in Slovakia. These are *Act of the NCSR No. 245/2008 Coll. on education*, or the so called school law, *Act of the NCSR No. 317/2009 on pedagogic and specialized employees*, and also the *Act of the NCSR No. 184/2009 on vocational training and preparation.*

We will devote this brief contribution to the so called teacher's law, or *Act of the NCSR No. 317/2009 on pedagogic and specialized employees* (further referred to as the „law“). Among the negative trends in the school system in Slovakia that were named in the explanatory memorandum to the aforementioned law the main were: 1) de-professionalization, 2) outflow of qualified teachers from the education system, 3) an unclear professional status and identity of pedagogues, 4) the aging of teaching bodies, 5) feminization of the teaching profession, 6) declining social status, 7) lack of an uneven qualification among teachers in varying regions, 8) low attraction potential of the pedagogic professions, 9) insufficient quality of the personal strategy of the whole resort and 10) a lacking quality of pregradual and continuous education.

The named law, effective since November 1, 2009 stipulates professional standards and professional growth, also a system of continuous education, it introduces a career system a credit system and rating. It distinguishes between pedagogical employees and pedagogical activity and between specialized employees and specialized activity. It introduces attestations and deals with the question of care for pedagogic and specialized employees, their protection and moral valuation. It is also concerned with the question of financing attestations and continuous education. Due to the limited scope of this paper we will only comment on some aspects of the currently effective legislation.

1.1. Predispositions for the exercise of the profession

A certain part of legislation concerning necessary predispositions for the exercise of the profession can be considered a reaction to the demands of parents. According to valid legislation the general predispositions for the exercise of the pedagogic profession and related activities are qualification, a documented clean record, a clean health bill documented by a certificate of physical and mental capability and knowledge of the official language.

Especially the regulation concerning health has ambivalent aspects. On one hand the argumentation of the proposing parties is clearly an attempt to solve the problem of inappropriate behaviour of teachers, by demanding not only a clean bill of physical health, but also psychological evaluations to confirm proper dispositions to exercise the profession. Compulsory psychological evaluations by the Health resort will decide if applicants are suitable for work with children.

The law also stipulates that the employer can demand follow ups of this evaluation, if there is concern that the health of the employee has changed. If the employee fails to deliver a statement proving their current state within 90 days, he or she might lose their job. Here it is necessary to note the possibility of lowering the social status of teachers even further, by affecting their self confidence as a result of stress and the possible stigma of psychological evaluations. Finally it is impossible to refute the concerns that the threat of a psychological evaluation of capabilities might become an instrument of power in the hands of the superiors and employers, as well as parents and children. In this regard it appears that the risk of developing psychological issues connected to the teaching profession needs to be further examined but most of all considered in the legislation about care and protection of the pedagogic profession, as well as its financial valuation.

1.2. The Problem of Violence

The legislation shows a clear effort of the proposing parties to solve the problem of the growing occurrence of violence in schools although there is no explicit remark in the case study of the law. But if we were to look at the discussion in Slovak print media regarding the status of female and male teachers as protected personas or public personas, this goal would become more clear. The law finds a solution to the aforementioned problem in creating a special status of a protected persona for teachers, to protect them from violence on behalf of students and their parents, and by protecting students from inappropriate and violent behavior of their teachers by ordering psychological evaluations to „exclude “those teachers from the educational process, who could have tendencies to behave violently or otherwise inappropriately. At the same time we could regard as preventive measures concerning violence at schools those regulations that state care and protection of pedagogic and educational employees, according to which the school director is obliged to provide preventive Psychological guidance at least once a year during their working hours, and provide training in preventing and controlling aggressive behavior, introspection and conflict- solving. Considering that there is not enough funding for executing even these minimalist measures, that the law suggests in the name of caring for the physical and psychological well being of the teachers and their effect was postponed until the year 2012, we have to voice concerns for the further worsening of the physical and psychological health of the members of this profession and the connected level of education and teaching at our schools.

1.3. Career Growth

The possibility of a career and professional growth is a necessary prerequisite of expertise for the work of teachers, and thus it is crucial to positively change it's social status. The question however remains weather the current frame of legislation provides adequate conditions to fulfill these goals. Unfortunately the law concerning the role of pedagogic employees does **not consider any gender perspective**. According to Cviková and Filadelfiová (2008, p. 99) the concept of professional growth of teachers in the career system as taken up by the law, *is rather based on the building of a career in a linear sense and thus represents a professional biography of a man, rather than a woman.*“ The possibility to choose a career path – a level and position – and thus a corresponding financial valuation should make the teaching profession more attractive. But at the same time due to a lack of any special supportive action the asymmetric gender division of labour in private as well as professionally could prevent women teachers from an adequate career growth based on the principle of equal opportunities (Cviková, 2007).

Continuous education can be generally viewed as a chance to introduce a gender sensitive approach into the process of education through the education of teachers. At the same time problems can arise with the implementation. Another question remains open regarding the financing of continuous education. In this relation it is likely that differences of economic strength among regions will be reflected by the local school budgets and therefore will be influential to the sums reserved for continuous education. In other words women and men working as teachers in these regions will have limited access to continuous education and will be forced to accept a larger role in the financing of their education.

This could naturally have a negative influence on the willingness of teachers to educate themselves further. It is also likely that this will impact the preference of such programmers of continuous education that will be financed from other sources than their own teacher's salaries or the school budgets, and most likely by government organizations. This could create an advantage for government based providers of continuous education and impair non-government organizations dedicated to education. It is possible to predict that gender sensitive pedagogy and gender sensitive education will not have sufficient (if any) representation within the programmes of continuous education provided by the government organizations (and even less so by church based organizations). Because of this the possible disadvantage for non-government providers and programmes of continuous education is a possible disadvantage for non-government providers and programmes of continuous education concerned with gender equality, gender sensitive pedagogy and education.

1.4. Differences in Representation of Men and Women

The statistic data indicates a different representation of men and women in the teaching professions – the majority of teachers in all standard types of schools except universities are women, as well as the fact that there are few women in leading positions at schools (Cviková, Filadelfiová, 2008). The data documents a horizontal and also a vertical segregation in secondary vocational education in Slovakia. The findings of a partial gender analysis of secondary vocational schools previously carried out by us have shown that although female teachers are a majority in secondary schools, there is a large discrepancy in their numbers in leading roles. The situation of men and women in the school system is different. It is mostly the women- teachers who are exposed to violence from pupils or their parents. It is the female teachers who can and sometimes do act violently in a direct interaction with students. It is the women teachers who risk facing doubts about their mental capacity necessary for their work – for example due to their violent or other forms of unacceptable behaviour (Horáková, [quot. 2009-10-09]).

The feminisation, openly considered a problem that needs to be solved in Slovak education (*Case study ...*, [quot. 2009-11-25]), is understood as a problem of quantity, linked to the growing number of cases of inappropriate behavior of children at schools and a low financial valuation of the teaching professions (Filadelfiová, 2008). The stereotyped images identifying men as the teachers with the ability to achieve discipline and gain the respect of children, but also of their parents by „a firm voice and a strong hand“ are counterbalanced by a stereotyped image of weak female teachers, unable to claim respect for themselves. These stereotypes continue the traditional stereotyped link of masculinity with strength, that is not only physical, but also psychological and mental, since man as a rational being is completely able to control and command himself. Meanwhile the feminine - according to western stereotyped thinking traditionally constitutes weakness (the weaker sex), and not only in the physical sense, but also in the form of irrationality and emotionality, rendering women incapable of self control and command, in other word mentally weak (Cviková, Juráňová, 2005).

Gender stereotyped images in the public discourse can create pressure on certain specific ways of solving problems identified in the school system. It is also necessary to note that until now the *Professional Standards of pedagogic activity (Profesijné štandardy pedagogickej činnosti)* representing a set of demonstrable skills in knowledge, attitudes and ability, have not been published. This fact has been pointed out by the school inspection - since the professional standards are necessary to construct tests of psychological evaluation of teachers (Horáková, [quot. 2009-10-09]). (Any) Professional standards as a base for the psychological evaluation of teachers for the practice of the profession express and also construct a certain specific type of identity of the teacher.

We would like to call attention to the fact that already the identification of (causes of) problems in the school system – weather explicitly expressed in the argumentation of the current legislation or appearing in the public discourse (covered by the media), like the feminization, growing violence and aggression at schools – is problematic, because it is based on a gender stereotyped reflection of this aspect of social life. To be a female teacher in this situation means being a possible object of violence or attack and thus require protection (status of a protected person), on the other hand being a female teacher also carries a responsibility for the growing trends of lacking discipline of pupils, lacking respect to authorities and growing violence towards representatives of the teaching professions. What kind of a teacher personality will we be looking for, if we consider the feminization a problem of quantity, manifested by a more intensive femininity of the teaching profession, which is stereotypically considered a weakness and submissiveness?

From a gender perspective this legislation can have a different impact on women and men in the teaching professions, it can especially become a threat to women teachers in the sense that it could disturb and lower their self appraisal, self respect as well as their social status.

2. Partial Gender Analysis of Secondary Vocational Schools in Slovakia

The base data for the audit come from two sources. The first one were school websites of secondary vocational schools in Slovakia, where data about numbers of male and female teachers were collected, about the school leadership and the commissions of various subjects, according to gender, as well as information about study departments present at the schools.

The second source was online information from the *Institute of information and school prognosis (Ústav informácií a prognóza školstva)* about numbers of students of various secondary vocational schools and their distribution in classes according to gender. The data was collected from March to April of 2009 and complementary research was conducted in September 2009. This second step was the result of our effort to add previously unavailable data from 50 schools, that was needed for a analysis (for example to obtain a more accurate cluster analysis).

2.1. A basic description of the setting, categories of schools and numbers

With regards to the stated goals of analysing gender segregation in the process of vocational preparation and because of analytic reasons, in the first step we have excluded grammar schools, musical colleges and secondary vocational schools without a school leaving certificate from the initial list of all secondary schools in Slovakia updated at the time. This resulted in a list of 231 schools that represent an exhausting set of schools of the selected type. From this total number we have not managed to receive gender specific data about the teaching body on 29 schools and from two schools we have not managed to receive similar data about the students. The final analysis of teaching bodies concludes findings from 202 schools and the analysis of students covers 229 schools.

According to the collected data there were 6 939 teachers in schools in 2009 and from this number 4 389 were women and 2 550 men (i.e. the percentage was 63,3 % to 36,7 %). The total number of students at this schools was 75 861, while the number of girls was 43 645 and boys 32 216 (i.e. 57,5 % girls students to 42,5 % boys). One of the first objectives of our audit was to find out whether it is possible to talk about specific girls 'and boys' schools in the context of Slovak secondary vocational schools. For this purpose we have created more categorizations of secondary vocational schools using different methodology and ways of construction. The first categorization was based on a logical and rational consideration and its premise is the logical division of vocations according to their direction of study. The result was 9 categories of secondary vocational schools – they are determined subjectively based on experience and knowledge of researchers of a project.

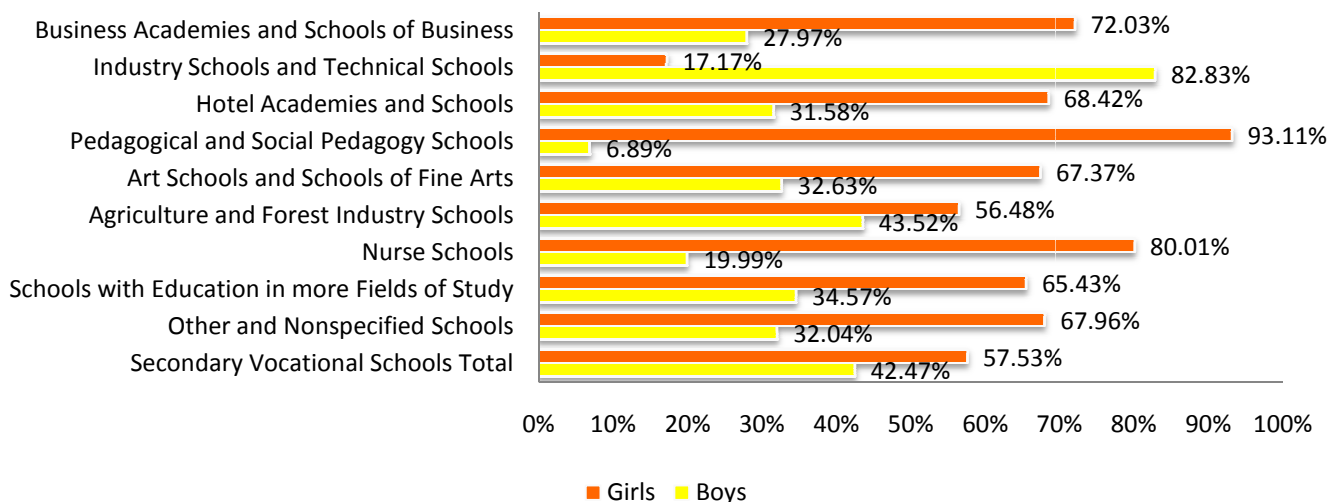
Table No. 1: Categories of secondary vocational schools in Slovakia and their numbers

Categories of schools (on logical basis)	Count	%	Cumulative %
Business Academies and Schools of Business	68	29,4	29,4
Industry Schools and Technical Schools	45	19,5	48,9
Hotel Academies and Schools	18	7,8	56,7
Pedagogical and Social Pedagogy Schools	13	5,6	62,3
Art Schools and Schools of Fine Arts	13	5,6	68,0
Agriculture and Forest Industry Schools	12	5,2	73,2
Nurse Schools	31	13,4	86,6
Schools with Education in more Fields of Study	13	5,6	92,2
Other and No specified Schools	18	7,8	100,0
Secondary Vocational Schools Total	231	100,0	

The numbers of single categories of schools correspond to the numbers of total numbers of students in the same category. Business academies and schools of business have the most students. In these schools there were 26 011 young people and from this number 72,0 % were girls (18 736) and 28,0 % were boys (7 275). The second largest group of students attends industry schools and technical schools (21 078) and the third is nurse schools (9 807). The smallest numbers of students were concentrated on schools with education in more fields of study (2 534) and art schools and schools of fine arts (2 568).

In regards to the object of the research the numbers of girls and boys in particular categories of secondary vocational schools are interesting. The only type of school where boys dominate over girls are schools with a technical or industrial specialization (45 schools). Within this category of secondary vocational schools there were 21 078 students, from which 17 458 were boys (82,8 %) and 3 620 were girls (17,2 %). Technical specializations are still more popular among boys and this creates premises for a continuum of gender segregation in the labor market. The analysis of numbers of students has also shown a decrease in the numbers of female students in the lower grades of industrial and technical schools, although it is a small decrease of approximately 2%. The situation is similar in other categories of schools.

Chart No. 1. Proportional representation of male and female students in particular categories of secondary vocational schools



The numbers of boys and girls studying in the particular categories of secondary vocational schools are relatively stable in the last five years. As is shown in chart number 2 there are no major differences between the numbers of new male and female students and graduates.

Chart No. 2. New (NEW) female and male students in single categories of secondary vocational schools compared to graduates (GRA)

The mostly feminized categories of schools in regards to the teachers are 1) Pedagogical and Social Pedagogy Schools (83,2 % female teachers); 2) Nurse Schools (80,8 % female teachers); 3) Hotel Academies and Schools (78,6 % female teachers). The fourth highly feminized category of schools are Business Academies and Schools of Business (76,3 % female teachers). Categories of schools with the highest numbers of male teachers are: 1) Schools with Education in more Fields of Study (65,6 % male teachers); 2) Agriculture and Forest Industry Schools (61,9 % male teachers); and 3) Industry Schools and Technical Schools (52,8 % male teachers).

As the empirical data demonstrates, the feminization of schools in Slovakia is remarkable and in more cases it is close or has risen above 80 %. However, in leading positions there are disproportionately more men present than they are among teachers in general.

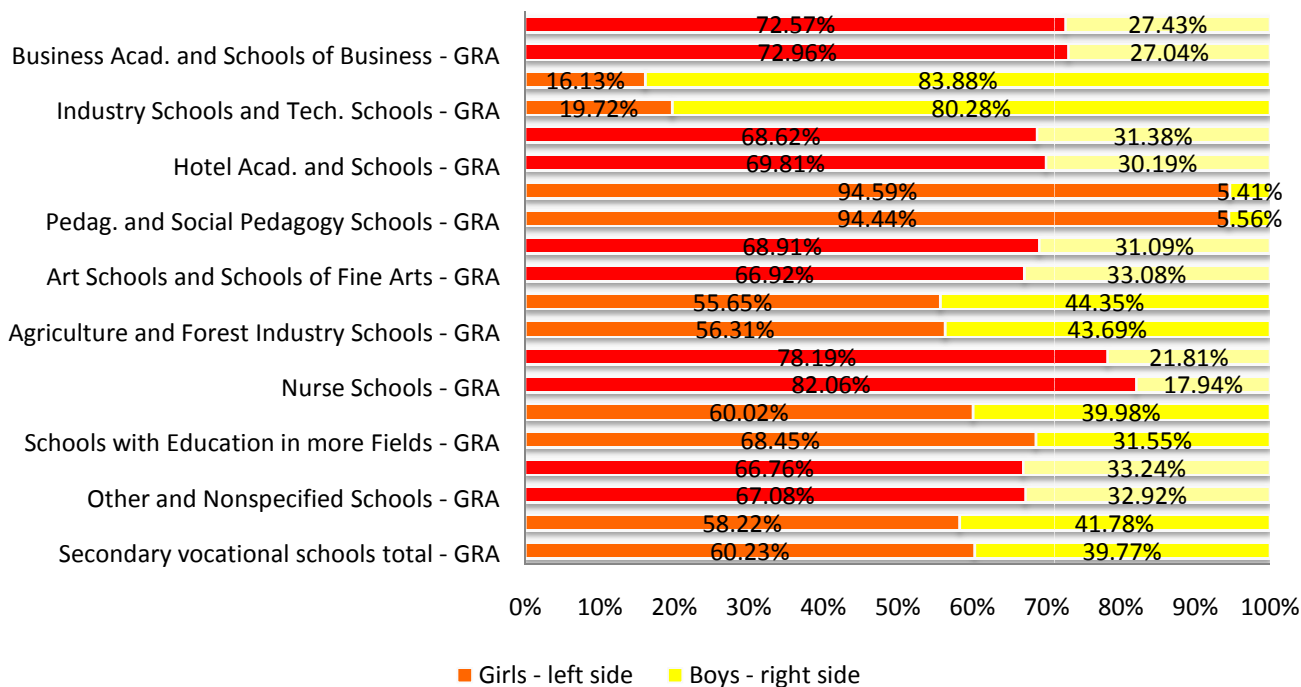
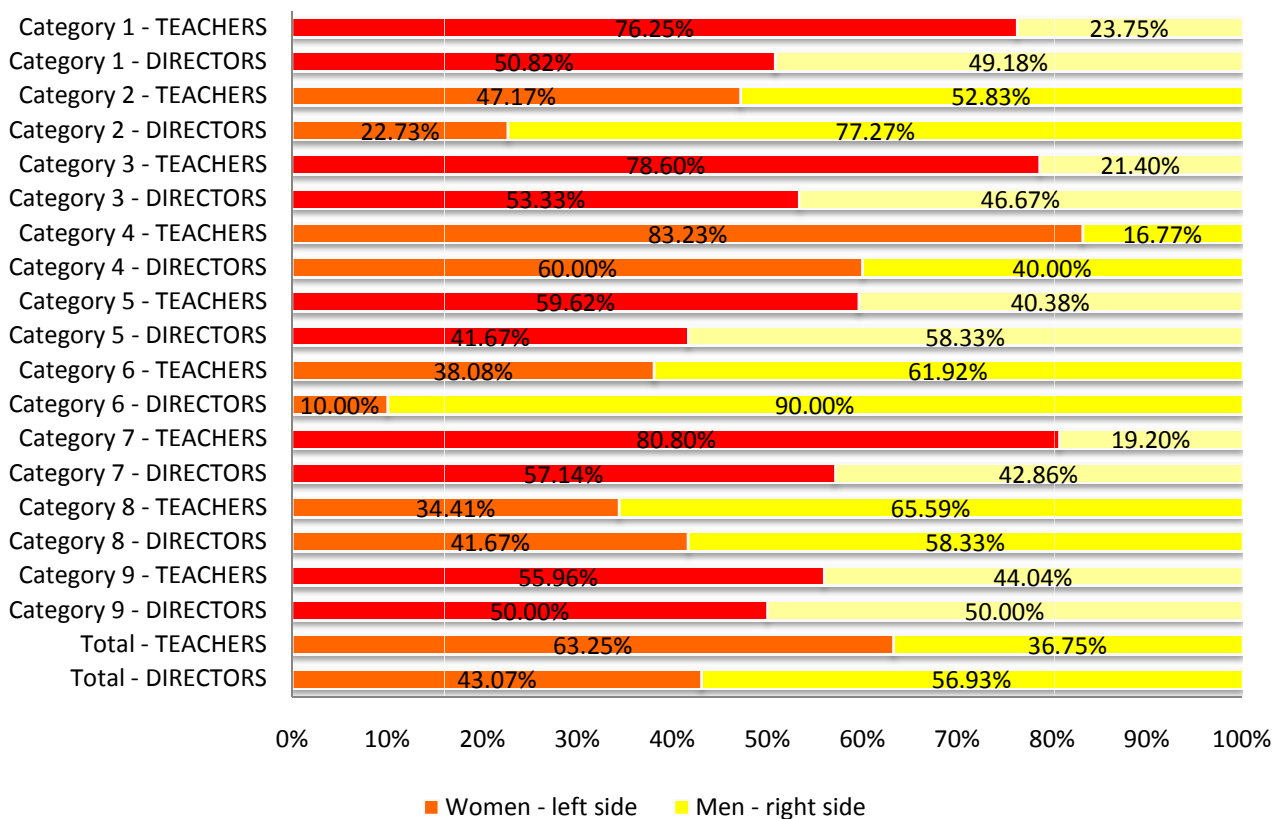


Chart No. 3. Comparison of the teaching bodies and individuals in directorial positions according to their sexes in single categories of secondary vocational schools



Legend	
Category 1	Business Academies and Schools of Business
Category 2	Industry Schools and Technical Schools
Category 3	Hotel Academies and Schools
Category 4	Pedagogical and Social Pedagogy Schools
Category 5	Art Schools and Schools of Fine Arts
Category 6	Agriculture and Forest Industry Schools
Category 7	Nurse Schools
Category 8	Schools with Education in more Fields of Study
Category 9	Other and No specified Schools
Total	Secondary Vocational Schools Total

2.1. Representation of men and women in managing positions

On the analyzed secondary vocational schools it is obvious that there is distinctive vertical gender segregation, in other words a disproportional representation of women and men in the leading or managing positions. The most equal representation of men and women is to be found on: 1) so called Other and Non specified Schools (50 % female school directors and 50 % male directors), and among teachers 56,0 % female teachers and 44,0 % male teachers; 2) Business Academies and Schools of Business (50,8 % female directors and 49,2 % male directors), while among teachers it is already 76,3 % female teachers and only 23,7 % male teachers, so the representation of women and men in the leading positions does not correspond to the proportions of men to women in the teaching body. The situation is similar in 3) Hotel Academies and Schools (53,3 % female school directors and 46,7 % male directors), while in the teaching body there are 78,6 % female teachers and only 21,4 % male teachers.

On the contrary the highest numbers of women in the directorial positions were found at: 1) Pedagogical and Social Pedagogy Schools (60 % female directors, and a total of 83,2 % female teachers and 16,8 % male teachers among teaching staff); 2) Nurse Schools (57,1 % female directors, the number of female teachers at 80,8 % and male teachers at 19,2 %); and 3) Hotel Academies and Schools (53,3 % female directors, while the ratio of female to male teachers was 78,6 % to 21,4 %). Considering the composition of the teaching bodies there can be no talk about gender equality in filling the managing positions.

The highest numbers of men in directorial positions in single categories of schools were found at: 1) Agriculture and Forest Industry Schools (90 % male directors), while there were 38,1 % female teachers and 61,9 % male teachers; 2) Industry Schools and Technical Schools (77,3 % male directors), while there were 46,2 % female teachers and only 52,8 % male teachers; and 3) Art Schools and Schools of Fine Arts (58,3 % male directors), while among teachers there were 59,6 % male teachers and 40,4 % female teachers. There were similar parameters at the Schools with Education in more Fields of Study (58,3 % male directors), but with a larger discrepancy in the percentile ratio of men and women in the teaching bodies – 34,4 % male teachers and 65,6 % female teachers. In total, based on the empirical data we can state an unevenly higher number of men in leading positions (56,9 % male directors to 43,1 % female directors) compared to the general representation of men in the teaching bodies (34,8 % male teachers to 63,2 % female teachers).

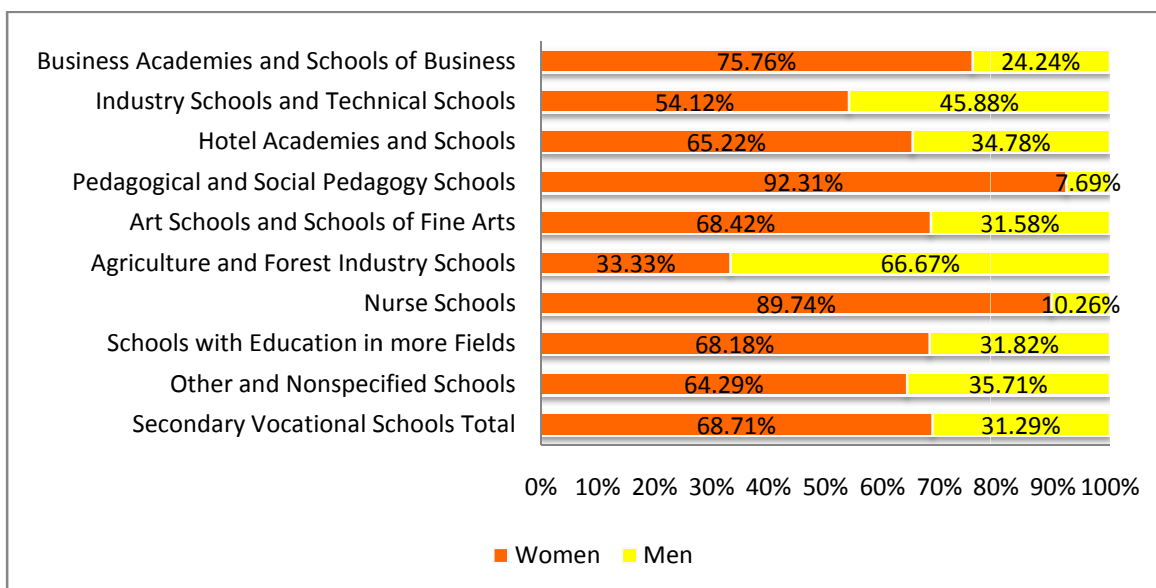
This situation suggests that in the selection of leading employees there might also be other factors taken into consideration than professional and managing skills. Stereotyped images of men as „natural“ leaders and the so called *glass ceiling effect and glass elevator* could be among these. This notion could however not be proven or disproven with the chosen method. But the gathered knowledge might suggest new fields of deeper research.

The situation is different with the observation of the structure of men and women in the position of deputy headmasters or headmistresses in secondary vocational schools. The categories with the most women in the position of a deputy headmistress are: 1) Pedagogical and Social Pedagogy Schools (92,3 % deputy headmistresses); 2) Nurse Schools (with 89,7 % deputy headmistresses); and 3) Business Academies and Schools of Business (75,8 % deputy headmistresses). The opposite – the highest numbers of men in the position of deputy headmasters were found at these types of schools: 1) Agriculture and Forest Industry Schools (66,7 % deputy headmasters); 2) Industry Schools and Technical Schools (45,9 % deputy headmasters); and 3) Other and Non-specified Schools (35,7 % deputy headmasters). The fourth category with the most male representatives in the position were Hotel Academies and Schools (with 34,8 % deputy headmasters).

In the observed secondary vocational schools there were altogether 224 deputy headmistresses (68,7 %) and 102 deputy headmasters (31,3%), and the total number of these positions was 326. The presented data comes from 192 secondary vocational schools, so at some schools there were two simultaneous positions of deputy headmasters or deputy headmistresses. When compared to the ratio of male and female school directors the total ratio of deputy headmasters to headmistresses was more balanced. The ratio in this position more or less compares to the ratio of male to female teachers in secondary vocational schools in Slovakia (63,3 % female teachers and 34,7 % male teachers, n = 202). But a deeper analysis has shown that there are schools where the situation differs from the average.

A rather large difference in favor of deputy headmasters, compared to the ratio of male teachers was demonstrable in the category of Hotel Academies and Schools (34,8 % deputy headmasters, but 21,4 % male teachers). In the category of Pedagogical and Social Pedagogy Schools there are more deputy headmistresses compared to the ratio of female teachers (92,31 % deputy headmistresses : 83,23 % female teachers). In the category of Art Schools and Schools of Fine Arts there were more deputy headmistresses compared to female teachers (68,4 % deputy headmistresses, but 59,6 % female teachers), similarly as in the category of Nurse Schools (89,7 % deputy headmistresses and 80,8 % female teachers) and at Other and Non-specified Schools (64,3 % deputy headmistresses and 56,0 % female teachers).

Chart No. 4. A Difference in the Percentage of Deputy Headmistresses and Headmasters in Single Categories of Secondary Vocational Schools



The collected empirical data do not enable us to find reasons for a dominance of female teachers in the positions of deputy headmistresses and the reasons for the dominance of male teachers in the positions of school directors. One of the possible explanations would be that the role of the school director has a higher prestige (including salary) than the role of the deputy headmaster. Also it is more connected with the representation of the school to the outside world, while the role of the deputy headmaster or headmistress is rather „filled“ with administrative work and organizing. However, this speculation needs more research and a deeper analysis.

2.4. Cluster Analysis of Secondary Vocational Schools

We have broadened the gender aspect analysis of secondary vocational schools in Slovakia to include another categorization of schools. While the first used categorization was created based on logical classification, this time it was based on mathematical and statistical methods. To create groups of schools we have used a classification analysis, to be precise a two step cluster analysis. The classification was created by using absolute figures. We analyzed 192 schools, where we managed to get sufficient information.

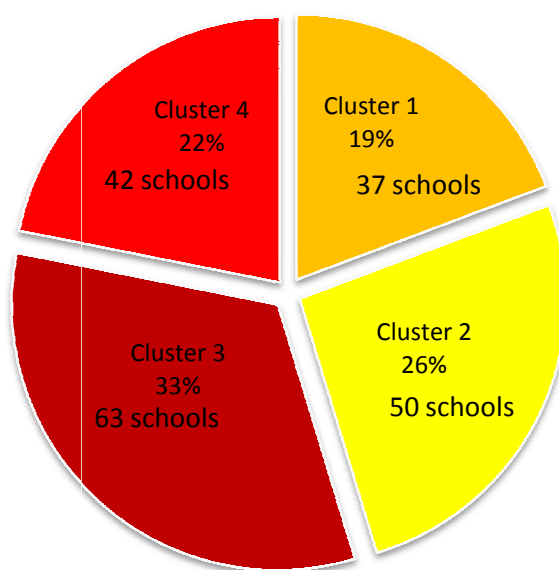
We have used these quantitative variables: 1) number of female teachers, 2) number of male teachers, 3) number of all students, 4) number of female students, 5) number of male students, 6) freshmen girls, 7) freshmen boys, 8) female graduates for the previous year, 9) male graduates for the previous year. Aside from quantitative we also used a nominal variable – the gender of the person in the directorial position. We have chosen the variables to reflect the gender dimension of the environment of secondary vocational schools.

As a result of classification we have four clusters, documented in chart No. 5: Important criteria in creating the cluster were: **presence of women and men in the teaching body of single schools and the numbers of female and male pupils**. Also important was the size of the school, so within this classification we can talk about a division into small versus large schools. Chart No. 2 shows the numbers of schools and their percentile presence in various clusters.

Table No. 2. Types of Secondary Vocational Schools according to Clusters

Clusters		Number of schools	Valid %	Total %
Cluster	Cluster 1 <i>Technical schools</i>	37	19,3	16,0
	Cluster 2 <i>Small Schools of Services and Care Managed by Women</i>	50	26,0	21,6
	Cluster 3 <i>Small Schools of Services and Care Managed by Men</i>	63	32,8	27,3
	Cluster 4 <i>Large Schools of Services and Care</i>	42	21,9	18,2
	Count of Included Schools	192	100,0	83,1
Count of Excluded Schools		39		16,9
Count Total		231		100,0

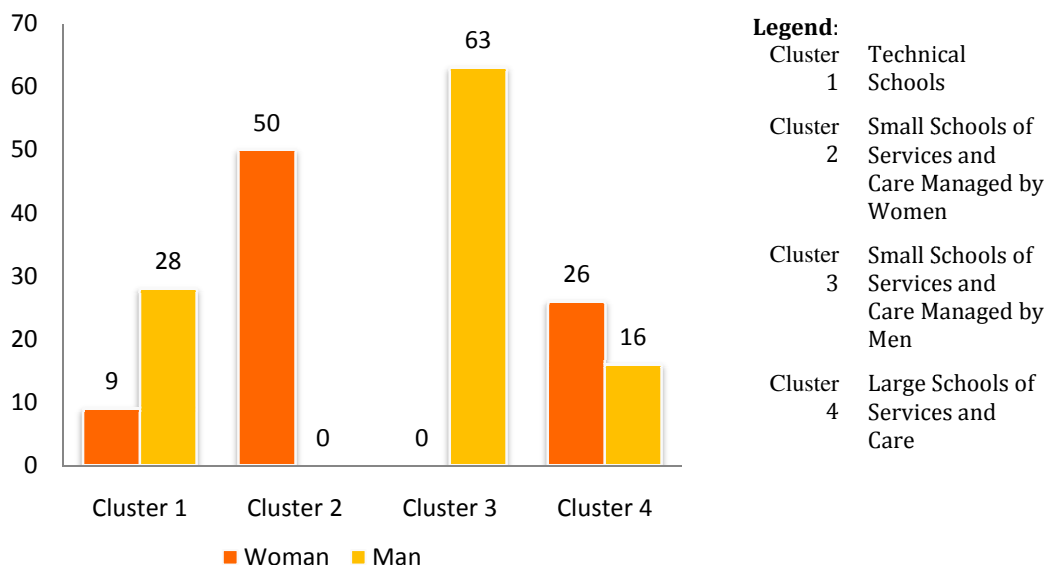
Chart No. 5. Clusters based on absolute figures, 4 clusters



The gender dimension of the classification has shown to be remarkable in the variable of „gender of the person in the leading position“ as is demonstrable from Chart No. 6. In clusters 2 and 3 these directorial positions are exclusively taken by one gender. We have considered these facts in naming the mentioned clusters.

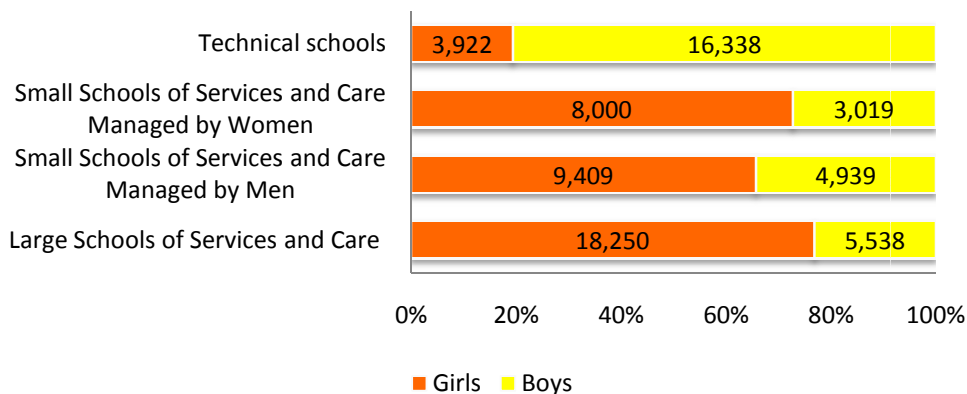
We were trying to find out whether there is a significant statistical difference among the clusters in the percentage ratio of female students. For this purpose we have used the method of comparing two relative numbers. In regards to the character of the used method we always had to compare two clusters between each other. We have carried out a total of six comparisons. We used a double-sided Z-test at significance level of $\alpha = 0.05$.

Chart No. 6. The Gender of School Directors in Single Clusters, 4 Clusters



Based on the results we can conclude that the differences between all clusters are statistically significant. In other words – according to the cluster analysis there is a difference in the relative numbers of girls (and thus also boys) studying in the single types of schools. The percentage ratio of girls studying in various types of schools according to the clusters allows us to consider the first cluster to be remarkably male, the second and fourth clusters to be markedly female and the third to be a relatively female cluster. The percentage ratio of male to female students is shown in chart No. 7.

Chart No. 7. Numbers of Male and Female Students of Secondary Vocational Schools in Clusters, 4 Clusters



Percentage rates of male and female teachers in the singular clusters do not correspond to the rates of male and female students. To prove the hypothesis that this difference is statistically relevant we have used the same test as in the previous case (double-sided Z-test at a significance level of 0,05). In each cluster we have compared the percentage of female teachers from the total number of teachers with the percentage of female students from the total sum of all students. In all cases the zero hypothesis (the rates are the same) has been disproved. This means that the percentage of girls who study at the school is statistically different from the percentage of women, who teach there.

This should theoretically be also valid for the percentages of boys – students and male teachers.

Regarding the division of schools in the clusters, it is noteworthy that the first cluster called „*technical schools*“, there are up to 33 schools belonging to the category of technical or industrial schools (which is 89,2 % from the whole cluster). Aside from these in the first cluster there only are 2 business academies and business schools, 1 forest industry school, and 1 school from the category of schools with education in more fields.

In the second cluster named „*small service and care schools managed by women*“, which include 50 schools business schools and academies dominate. In this cluster there are 16 (32,0 % of the cluster). They are followed by 10 nurse schools (20,0 % of the cluster) and 5 hotel academies and schools (10,0 % of the cluster).

In the third cluster, named „*small schools of services and care managed by men*“ includes 63 schools, and the largest number of business academies and business schools, which add up to 19 (30, 2 % of the cluster). Second are agriculture and veterinary schools, of which there are 8 (12,7 % of the cluster). The third place belongs to art schools and schools of fine art, adding up to 7 (11,1 % of the cluster).

The fourth cluster named „*large schools of services and care*“ includes 42 schools, most of which are business academies and business schools – in total 23 (54, 76 % of the cluster), nurse schools, of which there are 10 (23,81 % of the cluster) and pedagogical and social pedagogy schools together with hotel academies and schools, of each there were 4 (9,52 % of the cluster).

From the cluster analysis we can conclude that the gender segregation of Slovak secondary vocational schools is present on all levels from the managing positions to teaching bodies as well as students. The low numbers of female students on some vocational specializations are not simply to be dismissed as a result of low numbers of women in general in that specialization, since there are markedly more women teaching at precisely these types of schools.

3. Conclusion

From the gender analysis of *Act of the NCSR No. 317/2009 Coll. on pedagogical employees and specialised employees* we conclude the following:

The Status of a protected person is from our point of view a rather more repressive than preventive solution to the growing aggressiveness on behalf of students and their parents, since it further reproduces a stereotype of a „weak or powerless (female) teacher, who needs to be protected“ and at the same time it does not consider other forms of violence.

The arbitrary **control of psychological fitness** for the practice of this profession meant to protect pupils and students could lead to a lowered social status of the whole profession, stigmatization of teachers and it could become an instrument of power in the hands of employers and parents and their children, the students.

Minimalistic and under financed measures in care for physical and mental health of the teachers reflect a political devaluation of secondary vocational schools as a feminized profession. They expect an uneven distribution of funding and threaten not only the health of teachers but the overall quality of education in Slovakia.

We consider it to be a **grave problem** that there are no published *Professional standards of pedagogic activity*, since they are a necessary base not only for psychological evaluations for the profession but also as a starting point for implementing principles of gender equality. In regards to the **aspects of career growth** the reform starts out from a linear and androcentric understanding of professional career and does not consider asymmetric gender based labor division in private as well as professional life.

According to us the problem of career growth also lies in the **way of the intended financing of continuous education**, that can worsen the situation from the aspect of gender equality in economically weaker regions and create barriers for the implementation of gender sensitive pedagogy and education by non-government organizations. At the end we conclude that the legislative reform of secondary vocational schools presented by the analysis of this particular law is not only **not gender sensitive, it is even gender blind and androcentric**. **From the partial gender analysis it has become clear that there is a remarkable feminization and gender segregation of secondary vocational schools in Slovakia.**

In Slovakia's secondary vocational schools there are more female teachers (63,3 % female teachers and 36,7 % male teachers, all together 6 939) and more female students (57,5 % female and 42,5 % male students, in total 75 861). The segregation of schools is more visible in the analysis of schools according to their specialization. From 9 categories of secondary vocational schools, created by us, 8 are feminised and only in one category do male students prevail and male teachers slightly prevail.

All together female teachers and students start to dominate and boys study mainly technical and industrial specializations. There are still male students on Agriculture and Forest Industry Schools. Considering that there seems to be a link between the feminization of a specialization or a sector and the loss of its social (and economical) value, we can assume that a continuing feminization of the secondary vocational schools at the level of students will result in a loss of prestige of secondary vocational schools, devaluation of the achieved qualifications and a more difficult position on the labor market. This occurrence is commonly referred to in scientific literature as feminization and proletarianisation of particular specializations.

The four mostly segregated categories of secondary vocational schools at the same time belong to the schools with the largest numbers of students (Industrial and Technical Schools with the average of 468,4 students; Business Academies and Trade Schools with 382,5; Nurse Schools with average 316,3 and Pedagogical and Social Pedagogy Schools with an average of 286,8). **We think this fact could be used in a positive way for an effective application of de-segregating measures, leading to a desirably more equal representation of male and female students in the named school categories.** It would be useful to consider the fate of secondary vocational schools and consider where do boys study, when everywhere except technical and industrial schools girls dominate. This could become another problem of the labor market in the future.

The third finding is connected to the remarkable vertical gender segregation in the leading positions. An analysis of the data showed an **unusually high number of men in leading positions compared to their overall numbers in the pedagogical professions.** While in the secondary vocational schools there are only 34,7 % men compared to 63,3 % female teachers, in the leading positions there are up to 56,9 % male directors and only 43,1 % female ones. The highest discrepancies can be found at Agriculture and Forest Industry Schools (90 % male directors and 61,9 % male teachers), on Industry Schools and Technical Schools (77,3 % male directors and 52,8 % male teachers) and at Art Schools and Schools of Fine Arts (58,3 % male directors and 34,4 % male teachers).

We think that such remarkable horizontal gender segregation in favour of men – directors deserves more research to explore causes of this male dominance and the mechanisms that help to create it and reproduce it in the sector of secondary vocational schools in Slovakia. Do men in secondary vocational schools have better leading abilities as women? What is the real objective of a directorial position? Is the role of a deputy headmaster or headmistress more difficult in terms of administration and thus more accessible to women? What is the difference in function among class masters or mistresses? As we have stated above the discrimination of women in their access to the position of school director could be caused by the representative character of the position, the higher payment, and also the link to the still very well spread gender stereotype of the man as provider and leader. **It might be also influenced by the lack of male teachers in secondary vocational schools and also a phenomenon called the glass elevator.**

Vertical gender segregation in the school system is also responsible for gender specific differences in wages and Slovakia has one of the highest differences from all European Union states. This only emphasizes the need for institutional solutions of gender inequalities in managing positions.

The fourth finding of this research comes from the cluster analysis. It confirms the gender segregation of schools also by using mathematical and statistical methods. **It clearly shows a higher number of boys studying at technical and industrial schools (with the exception of textile and fashion industry schools) and segregation in managing positions.**

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