

Dr Zdenko Medveš et al.¹

Contribution of vocational education and training to equity and social inclusion

Abstract: Vocational education is considered socially inclusive if it provides actual employability and income above the poverty threshold. In terms of equity the problem arises when differentiation of vocational education matches the hierarchical structure of professions. The article analyses the actual chances that education in Slovenia gives to the disadvantaged social groups, especially those coming from families with lower socially-economic status, those whose mother tongue is other than Slovene, persons with special needs, and women. The changing pattern of enrolment in different types of upper secondary schools in the last few years reveals that the vocational schools have gradually become schools leading to social marginalisation and are therefore losing their attractiveness. But it is impossible to give a complete answer to the question about the level of inequality that the disadvantaged social groups may experience since some crucial data is lacking due to the protection of personal data; the Slovenian legislation is restrictive in their collection. No data is collected which would enable monitoring of the equity of the education system at different levels: at enrolment, during schooling, and at the completion of secondary education. But some findings of the studies conducted on the representative samples show us a displeasing picture. Therefore action has to be taken both at the societal and educational levels: the dialogue between social partners has to be enhanced, higher parity of esteem in upper secondary education achieved and the quality of learning outcomes improved. A variety of contemporary vocational qualifications and also additional alternative learning pathways leading to them have to be developed. In addition, institutional differentiation of vocational education should be replaced with a more unified, but flexibly organised, comprehensive vocational school.

Key words: vocational education, equity, social inclusion

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Views on school equity In modern democratic societies, equity in education is more and more recognised as an essential characteristic of national educational systems. Several views and concepts of equity exist. Traditional understanding of equity has two basic meanings. On one hand it means compliance with legislation, and on another equality. The first condition for educational system to be equitable is that the legislation regulating it is equitable. The second condition is the principle of equal possibilities for education, regardless of social situation, gender, race, nationality, religious beliefs and other differences which are insignificant for education. One of the most common manners of empirical assessment of equal educational possibilities in a given educational system is measuring the degree of correlation between the variables which mark the status of children (gender, parents' education, socio-economic status) and accessibility and success of their schooling at different types of schools and at different levels of the educational system. The higher the correlation, the lower the equity of the educational system, but only if positive correlation is a consequence of differences in educational possibilities, and not of differences in preferences of children and their parents. From that perspective, vocational education seems to be the most inequitable part of educational system, as here the correlation between the mentioned variables is usually much higher than in the system of general education. But in addressing equity in vocational education, two things must be taken into consideration. First, the role that vocational education plays in ensuring equity in educational system as a whole, and second, the degree of equity in vocational education itself. The degree of equity in vocational education itself depends mainly on the successful implementation of various principles of equity ('to everyone according to one's merits', 'to everyo-

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ne according to one's capabilities, 'to everyone according to the results of one's work', etc.) in every particular vocational school and in the whole sub-system of vocational education. These principles are an attempt to concretize the general principle of formal equity, which requires that the same are treated equally and the different differently. Therefore, for example, a teacher has to grade all pupils in a given class who have shown the same knowledge (put in the same effort, etc.) with the same grade. But that would only achieve equity of grading in one class. To ensure it at the level of a vocational school or the whole sub-system of vocational education, all teachers should be using the same criteria for grading. In that sense, the assessment of equity in vocational education is in fact not different from the assessment of equity in general education, only it has to be performed on comparable groups. But in that we can already see the specifics of vocational education. In the context of general education, external differentiation or concentration of less successful children (who are very often the very children coming from socially and culturally underprivileged environments) to separate groups, classes or schools is usually interpreted as unfair, as it selects and separates children according to characteristics on which they very often have no influence, but which are essential for their further schooling and therefore largely for their success in life. Vocational education, on other hand, has to be differentiated by disciplines and branches. In the context of vocational education, differentiation of children and adults by branches and disciplines is understood in the opposite way, i.e. as an element of equity. Therefore vocational education is usually socially inclusive, as it leads to skilled employment. Employment has a key role in preventing social exclusion, and is at the same time one of the essential social foundations of human self-esteem. Therefore vocational education is an important element of the social strategy for achieving higher levels of social equity and social inclusion; but it can only be that if it provides actual employability and income above the poverty threshold (Halliday). From that we can conclude that not all branches and all programmes of vocational education have the same role in preventing social exclusion, although they are socially inclusive as they include a big part of socially less privileged persons. The problem in terms of equity arises especially when differentiation of vocational education is adapted to the hierarchical structure of professions, providing for its social reproduction within a discipline or a branch of education. Also, the mere inclusion in vocational education does not guarantee equity of the whole educational system. Educational achievement of persons from marginalised environments has to be improved through positive discrimination (lower number of pupils in class, better teachers, equipment, etc.) in order to provide quality education for employment, further education and active citizenship. It is therefore also true for vocational education that equity cannot be measured only by equal possibilities, but also by realistic conditions to attain quality education for flexible employment, lifelong learning and development of personal and professional career.

Our study does not address all the above questions, our *key question is*: how high benchmarks, which Slovenia reaches in the field of education, are rea-

ched by less privileged social groups, among which we count groups with lower social status, citizens for whom Slovenian is not their mother tongue, persons with special needs and women. We are interested what are their realistic possibilities within upper secondary education, especially vocational education.

Position of vocational education and training in educational system – the principle of positive discrimination

The system of vocational education has been built on basic premises of positive discrimination and lifelong learning already for a good quarter of century, as the current school paths in vocational education and training have been designed already in 1980s. But these premises were completely set after the reform of Slovenian legislation on schools in 1996, when the principles of positive discrimination and lifelong learning were established also in relation between vocational and general education – gymnasium/grammar school. The principle of *lifelong learning* means abolishing school ždead ends, i.e. the paths that lead nowhere ahead but require returning back. Setting up such educational paths in the system of secondary education now enables advancement in acquiring higher levels of education (from ISCED2 to ISCED3 up to ISCED 5,6) and by that building of professional career without returning back to the beginning of education.

The principle of *positive discrimination* is upgrading of the principle of lifelong learning, and in the educational system it means that for the same level of education (for example ISCED 3 or ISCED 4) and the same profession, two paths of education are laid out: a direct and an indirect. The direct path is shorter by a year or two, but steeper and therefore more difficult and riskier. A good example of direct paths to acquire full upper secondary education in Slovenian system is gymnasium and secondary technical school. The duration of both is 4 years. An indirect path to the same level of education (full secondary) or the same profession (for example at the level of a technician) is longer, and therefore more appropriate for certain parts of population which have difficulties in advancing at school due to any reasons. Indirect route is comprised of several education levels and already after 2 or 3 years of schooling enables acquiring completed education for employment and for further schooling.

It is possible to enrol in lower vocational education with completed 7th grade of 9-year elementary school (or 6th grade of 8-year programme) or with completed elementary school with lower educational standard. There is also a possibility of continuation from a lower to a 3-year vocational education, usually in the second year of schooling in a similar discipline or profession. Lower vocational education enables that participants fulfil, in total of two years of education, the key knowledge on the level of compulsory education and are trained for less demanding tasks in the profession, and usually compensate one year in the 3-year vocational education. As also the youth with special needs (including the ones with minor mental disorders) can enrol in lower vocational education,

this form of education in principle also means an instrument of strengthening inclusion.

The system of 3-year vocational education is upgraded with a 2-year vocational-technical education (what is called the 3+2 system), which enables, without returning back to the beginning of education, in total of 5 years, to acquire vocational maturity examination (vocational matura), i.e. the same level of education and profession as obtained in corresponding discipline from 4-year secondary technical education. Consequently, it gives the same rights in employment and in continuation of studies in tertiary education at all higher and high schools (except University study programmes). Taking a 'matura' course, anybody who has completed any vocational or technical school can obtain a general matura and by that a possibility to continue studies at all forms of tertiary education, also at University.

Positive effects of high vertical and horizontal transitivity in secondary education are visible in high benchmarks

For assessment of equity in vocational education, the only important fact is not just formal possibility of vertical transitivity (from lower to higher levels of education) or of horizontal transitivity (from vocational and technical education to general (to matura), and vice versa from general (gymnasium) to vocational and technical education, but also how population is using the possibilities provided by the system in reality. In the real world, unfortunately, not all possibilities of transitivity are equally implemented. The trends in transitivity reflect characteristic Slovenian values in the sphere of education. Two values are especially typical: a) to acquire higher level of education at secondary level, and b) if possible it should be gymnasium / general matura. Firstly, that is visible in aspirations for transition from lower levels and from simpler ancillary professions (ISCED 3C) to more demanding (ISCED 3B). But it is also massively reflected in the wish for transition from standard crafts and industrial professions (ISCED 3B) to professions at the level of a technician, or to what are called the 'service professions' (insurance business, administrative-economics, tourism, health care, childcare workers, etc.) (ISCED 3A). So in the recent years we can notice in our school practices that the great majority of graduates from 3-year vocational education continue schooling at 2-year vocational-technical school which ends with a vocational matura, and that enables them acquiring qualifications for a higher profession in the branch, and opens the path to studying in tertiary education.

Such school organisation of secondary education has no doubt contributed to at least four important achievements, which place Slovenia among the most developed European countries in the field of education.

1. In Slovenia the percentage of population that does not continue schooling after compulsory education is small,
2. a high percentage of population that acquires full secondary education and

- by that obtains possibility to continue studies at tertiary level,
3. a high percentage of adults continue formal education to acquire higher level of education,
 4. slightly above European average is also inclusion in education for population up to 29 years of age.

Ad 1) Benchmark: Until 2010 not more than 10% of population aged 18-24 with completed elementary school or less	
	2006
EU	15,3
Slovenia	5,2
Ad 2) Benchmark: Until 2010 85% of population aged 20-24 with completed higher secondary education	
	2006
EU	77,8 %
Slovenia	89,4 %
Ad 3) Benchmark: Until 2010 at least 12,5% of adults (25-64) participating in education	
	2006
EU	9 %
Slovenia	15 %

Tables 1-3 (Source: All data for year 2006 are extracted from the Commission Staff Working Document *Progress towards the Lisbon Objectives in Education and Training, Indicators and benchmarks*, 2007)

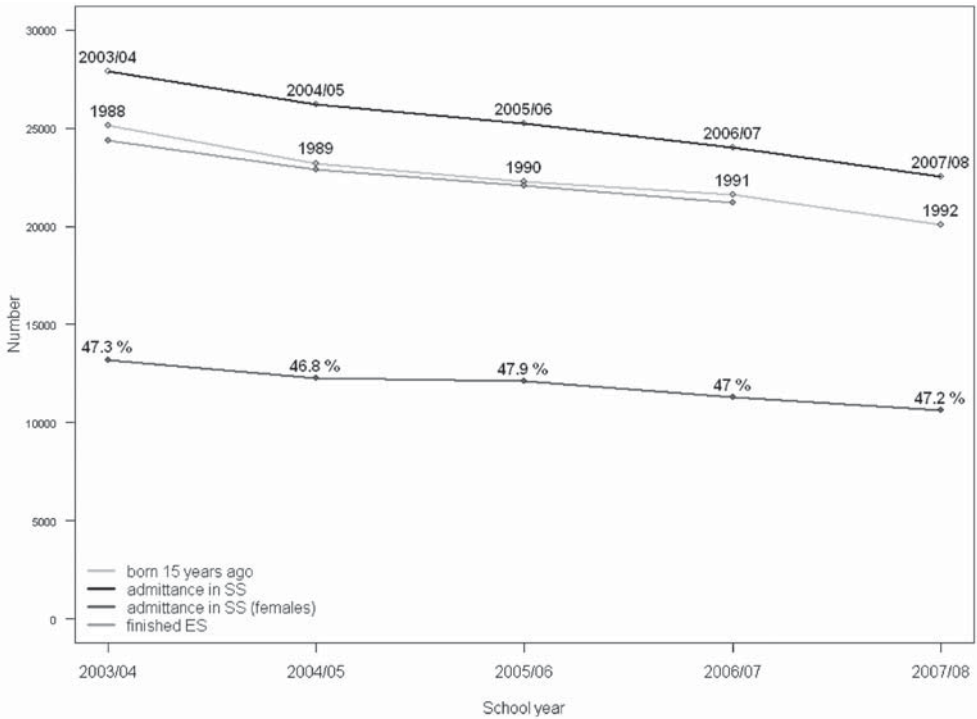
Negative trends in 3-year vocational education

Decrease in national birth-rate 'affects' mainly vocational education The occurrence of high educational aspirations, which is reflected in a high percentage of youth who continue education, is not without negative effects. We will show that on the basis of the following table.

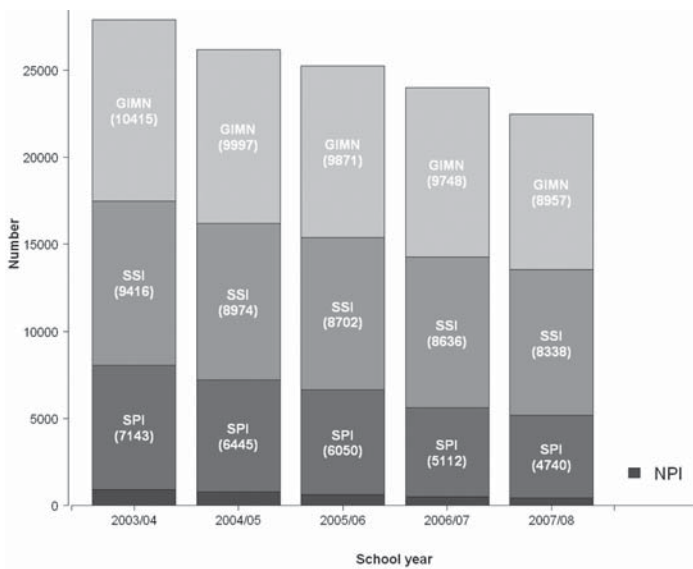
First we would like to point out the background of the presented dynamic of enrolment to secondary schools. A visible decline in enrolment is a consequence of low birth-rate in Slovenia in the past two decades. At the end of 1980s, around 33.000 children were born in Slovenia per year, while in 2006 just above 17.000 were born. The effects of this fall are, in the recent years, visible also in enrolment in secondary education.

The index of total enrolment in all types of secondary schools has, due to lower growth of population, decreased by 20% in the past years. But it is still true that around 98% of generation continues schooling after elementary school in one way or another.

More than dynamics, originating in birth-rate, we are interested in its social dimension. We can see that the decrease in enrolment in secondary schools due to a decrease in birth-rate was almost totally to the detriment of vocational



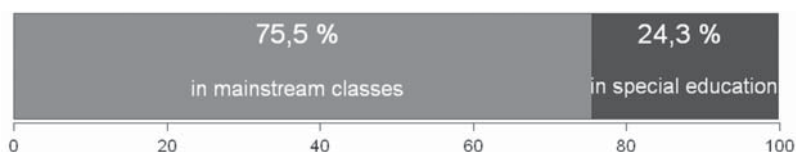
Picture 1: Enrolment in the first year of secondary schools, with regard to the number of births 15 years before, and the number of graduates from elementary school (prepared on the basis of data from the archive of MES – Ministry of Education and Sport)



Picture 2: Dynamics of enrolment in the first year of different types of secondary schools (prepared on the basis of data from the archive of MES)

education (ISCED 3B and 3C), as the absolute number of enrolment in secondary technical schools and in gymnasium (ISCED 3A) remains stable during this time .

We also have to mention enrolment in lower vocational education, which decreased by more than a half. Considering the small number of pupils, this school does not have a real function in the school system any more. Pupils with uncompleted elementary school and with elementary school with lower educational standard are admitted (316 to 445 persons per year are enrolled), so it is more and more becoming a 'special' vocational school. But that is in conflict with principles of integration, on which Slovenian system is based. Namely, integration has been very much strengthened at the level of compulsory education in Slovenia in the recent years.



Picture 3: Percentage of elementary school pupils with special needs, integrated in mainstream classes, and in special education – school year 2007/08 (prepared on the basis of data from Statistical Office of the Republic of Slovenia – SORS)

An advantage of lower vocational schools are really small learning groups, but on the other hand their main disadvantages are: a) differentiation of educational system already at the age of 15, b) very limited offer of programmes and occupations, especially for girls, and c) very badly developed network of schools offering these programmes. A challenge for the future is to think about integration of lower vocational education into the 3-year education. At least two important details show that such integration could be successful:

- In yearly reports on general and vocational matura we can see that matura exam is successfully passed by 350 persons with special needs every year (which is only 100 less than the number of those enrolled in lower vocational education in 2007/08) which are educated in integrated form, which points to the fact that our secondary-school teachers can offer suitable help and support to their education in inclusive forms,
- Every year more than half of pupils, after completed lower secondary school, continue schooling at secondary vocational or technical school.

A decrease in interest for vocational education is a form of escape from social marginalisation and exclusion

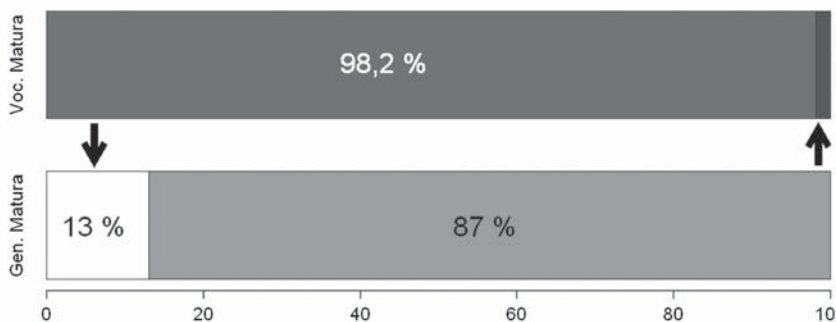
Critical is especially the trend that, in the past five years, enrolment in 3-year vocational education has almost halved (index 66, for girls 58). That is a bigger problem, as 3-year vocational education is mass education in terms of societal needs and vocational profiles, because all professions on the level ISCED

3B are educated here. We would therefore expect that this would be a mass secondary school, but the trends of enrolment in the past years show that this school is quickly losing attractiveness. But not only lower enrolment, an important fact is also the escape of graduates' from 3B to education at level 3A. On the basis of reports on vocational matura we are assessing that a great majority of graduates from 3-year vocational school continue education in vocational-technical school until acquiring a vocational matura, which opens the door to tertiary education, and at the same time means 'leaving' the wide vocational profile (ISCED 3B) and obtaining a profession at the level of a technician (ISCED 3A). In 2006, vocational matura exam was taken by 5.700 candidates (which is 33% of all vocational graduates in a given year), which have first completed 3-year vocational education and then continued at vocational-technical education (system 3+2). If we compare this percentage with enrolment in 3-year vocational education five years ago, it means around 80% of everybody who enrolled in secondary vocational school at that time. We are not claiming that the connection is causal, as detailed and precise data about transition of generation from 3-year vocational school to further education is not available; we can only assess that in a generation of youth in Slovenia only 25% of generation remained at level ISCED 3C and 3B. When assessing transitivity in the system of Slovenian vocational education, we must also consider transitivity between general and vocational education. Also here we can notice very obvious trends. Transitivity from gymnasium to vocational education is organised by vocational training, which is financed by the state for gymnasium graduates. Around 1,7% gymnasium pupils per year enrol in vocational training, the duration of which is maximum one year. The reason for such low percentage is no doubt in low valuation of vocational education, although it is true that also offer for such additional education for gymnasium pupils is relatively poor. Slovenia has not followed the example of numerous other European countries, which have, with expansion of enrolment in gymnasium, also expand offer of vocational education after completed gymnasium. So far only rare professions at level 3A enable that: economic-administrative technician, childcare worker in kindergartens and branches of catering industry, tourism and computing, which are full-numbered in regular education anyway (for example: among vocational graduates, around 45% are economic-administrative technicians). The reason for small possibilities of additional education for gymnasium pupils is mainly the system of one year training, which is, in opinion of the majority of branches-in-excess-demand, too short to be able to acquire vocational qualifications required by the labour market. School policy in the past years has listened to the argument of the branches and has according to new VET law prolonged the vocational training for half a year.

Is in the background of high educational aspirations high valuation of education, or fear of social marginalisation?

The question of course is, whether this prolongation of vocational training would increase attractiveness of education of gymnasium pupils in vocational

sector. In answering that, we have to immerse in the background of the high educational aspirations in Slovenian population, and face the values which stimulate them. Values are an important factor in decisions of population for a particular type of school. If we look at the opposite transition, the transition from vocational schooling to general gymnasium and general matura, we find a completely different picture from the one shown in transition of gymnasium pupils to vocational educational sector. Transition from vocational sector to general matura is, in Slovenian school system, organised via a one-year matura course. This is also an organised form, financed by the state: around 7% of graduates come to general matura exam from this programme every year. In addition, vocational graduates can, on their own initiative, take an additional matura exam in one subject of general matura after they have completed vocational matura, and by that place themselves almost on the same level in the rights to continue studies at tertiary level, because they can also continue studies in university programmes (except for medicine, law and pedagogical and some humanistic studies) which are otherwise not available to vocational graduates. This percentage is around 6% per year. In total, 13% of general matura graduates therefore transit from vocational education to general matura, while in the opposite direction, from gymnasium to vocational matura, the percentage is only 1,7%.



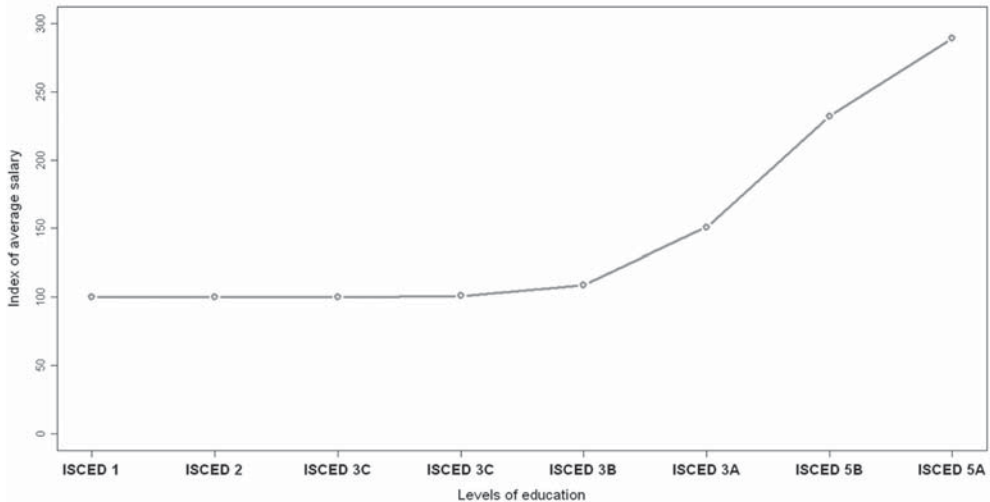
Picture 4: Transition from vocational branches to general matura and vice versa, from gymnasium to vocational education (prepared on the basis of reports on general and vocational matura for 2006)

This undoubtedly points to the prevalent Slovenian value regarding secondary education: *to acquire full secondary education at level ISCED 3A, if possible at gymnasium, and have all possibilities open for continuation of studies at tertiary level.*

Estimates also show that more than 91% of vocational graduates want to continue studies at tertiary level.

In the background of this valuation is social climate which has been present for a longer period, also from the 'socialist times', when some kind of negative discourse started in valuation of crafts and industrial professions, and on the other hand the social significance and prestige of bureaucracy was strengthened.

This is also reflected in low valuation of the work of professions at level ISCED 3C and unfortunately also ISCED 3B, presented by 3-year vocational education, which can be seen in collective employment contracts and in the whole wage system of public and private sector. But in contrast, the same professions are well-paid and have relatively good reputation as private entrepreneurs.

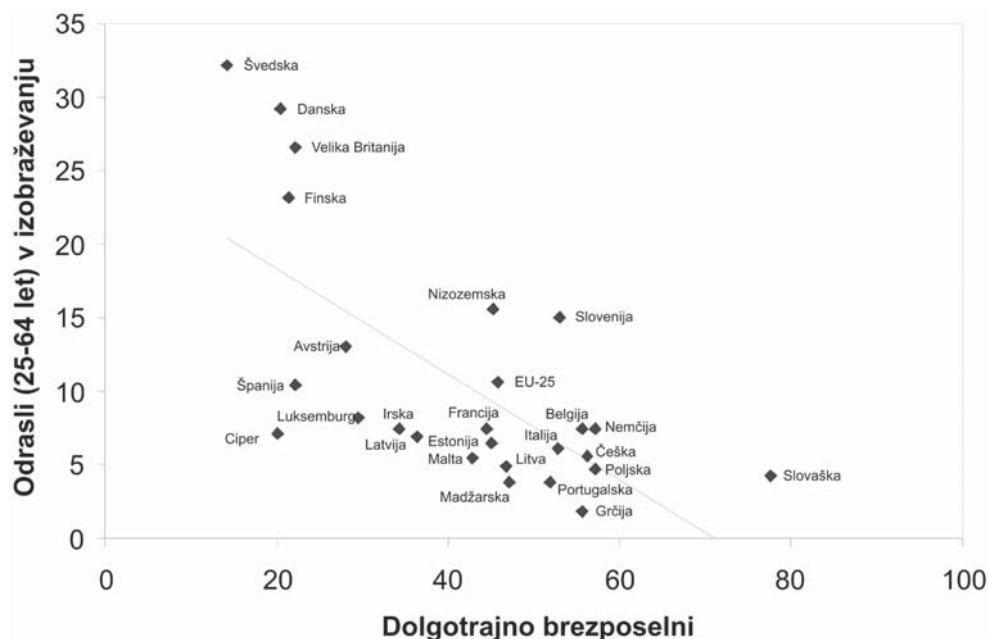


Picture 5: Chain indices of average salaries of employees employed with private individuals and legal entities, per levels of school education (Source: prepared on the basis of data from the SURS 2005)

From the table, progressive correlation between the level of education and average salary is visible. Between the levels 3C and 3B on one side, and 3A on the other side is a clearly visible hierarchy, and also population understands levels in such hierarchical way. A levelling of wages is visible all the way to ISCED 3B level included, and here is the biggest 'leap' of average salaries, exactly between ISCED 3B and 3A, and of course further to 5B and 5A. The shown wage ratios can have important contribution to the explanation of educational aspirations of Slovenian population.

But it is not only the salary what generates high educational aspirations. Many traditional elements of valuating professions join it. Hierarchical ratio between professions at level 3C and B and professions at level 3A leads to the fact that professions below level ISCED 3A are still marked as predominantly manual, work in them is more dependent on external control and is routine, less creative (except in the form of private entrepreneurship); for these professions there is also not much possibility of promotion and development of professional career. All this, coupled with low wages, is diminishing their reputation in society. It is obvious that these valuation orientations have set up among population a system of educational values, in which education at level ISCED 3C and 3B is linked to an image of danger of general social marginalisation, which

is for an individual even more critical than safe employment. Namely, the fact is that education still has a high level of formal value in the system of wages (collective or tariff agreements). The system of salaries is still more dependent on the level of education than on work performance and other factors. Also data about unemployment does not have real motivational effects on the choice of school, as majority of regions, except the most developed central Slovenian region, mainly require ancillary workers and workers without profession. Until 2003, the most employable persons among the unemployed were persons at level ISCED 3 C and B, while after 2004 also persons with level ISCED 3A were more easily employable. So we can understand the trend that youth and adults decide for education leading to professions and the level of education, for which higher income and reputation is ensured, and also for professions (economic administrative area) in which the risk of unemployment is relatively high. But on the other hand, as much as 40% of youth up to the age of 30 say that they would accept work with lower position and salary than appertains to the level of education which they acquired (Slovenian Public Opinion – SJM, 2004). In practice, people with acquired level of education 5B and 5A are very often employed for work, for which level 3A is required. Weak correlation is for Slovenia shown also between the indexes 'participation in education' and 'long-term unemployment', which again points to the fact that Slovenian citizens participate in education more because of high valuation of knowledge and education than for pragmatic reasons, such as for example employment.



Picture 6: Correlation of percentage of adults (25-64 years) in education and training with percentage of long-term unemployed in the total number of unemployed (Source: SURS 2007)

To social marginalization and exclusion leads also differentiation of vocational education

Differentiation in educational system is potentially leading to social exclusion

Any external differentiation in educational system is potentially leading to segregation and diminishes its equity. The same is with differentiation of vocational school types, which youth choose after completed compulsory education, at the age of 15. In that year they have to choose one of the four types of education which are available: lower vocational, 3-year vocational, 4-year secondary technical education and gymnasium (grammar school). To diminish discrimination effects of this differentiation, we have developed numerous paths in Slovenian system to bridge enclosedness of schools, for vertical and horizontal transitivity without returning to the starting year. All this was described in detail in previous section, positive and negative consequences were shown.

Now we cannot avoid the finding that negative effects of differentiated system of vocational education have been strengthening in the past years, which was stimulated on one hand by the shock in birth-rate and on other hand by political and economic transition. With implementation of market economy, relationships at the labour market were also changing. Transition from the former full or fictive employment to real employment caused a surplus of labour force, and also structural unsuitability of the employed. Requirements for some professions are decreasing, especially where whole branches of economic activity were reduced or they even disappeared. Consequently, in the transition period enrolment in certain vocational schools was strongly reduced (textile industry) and some were abolished (mining, leather, furrier's trade). We can understand that the problem of differentiation of secondary schools (vocational, technical schools and gymnasium) is aggravated by the already described orientation in values of Slovenian population with regard to choice of school, as certain forms of education (lower and secondary vocational) simply don't fulfil their expectations.

The best elementary school pupils enrol in gymnasium

With regard to the low valuation of certain vocational levels we can conclude that the choice of secondary school is based on negative selection. Lower vocational schools are chosen by pupils with lower study performance and with lower social indicators, possibly to a greater extent even citizens whose mother tongue is not Slovenian, and persons with lower study capacity.

School year	3-year vocational schools	4-year technical schools	gymnasiums
2007/08	117 to 135	116 to 149	137 to 180
2005/06	25 to 31	61 to 79.5	83 to 113

Table 4: The span in the minimum number of points in study achievements (study results and other achievements) for enrolment in particular school, in case of limited admittance (Source: Archive of MES)

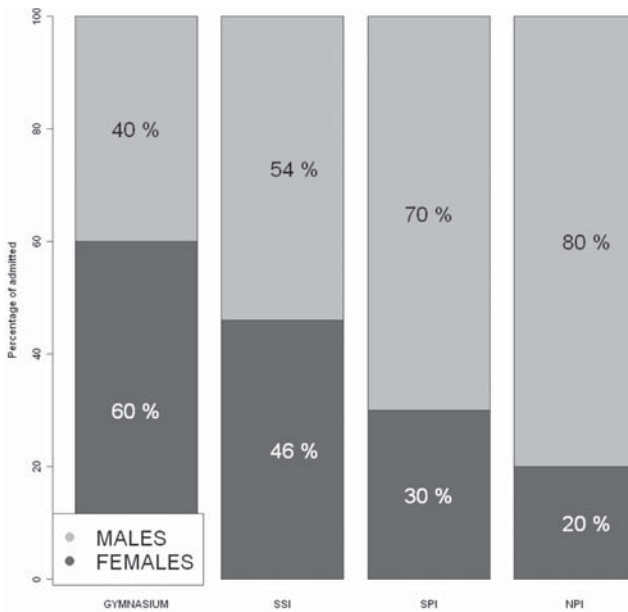
For lower vocational schools, admittance has never been limited. Difference between years is a consequence of change in criteria for choice. The span in the picture illustrates 'negative selection' in enrolment from elementary to secondary schools. Pupils with lowest school results come to lower vocational and to 3-year vocational schools, which is reinforcing the differences in quality among schools, as well as social, economic homogenisation, because in Slovenia we also have positive correlation between success at school and socio-economic cultural factors. Data is also pointing to a certain paradox. In 2007/08 it was more difficult to be admitted to a secondary vocational school with limited admittance than to a secondary technical school or even to a gymnasium, which had not limited admittance. It is especially difficult to explain the trends in changing criteria for choice, as we come across another paradox: in 2007/08 interest for 3-year vocational and technical education is much smaller than in the previous years, but some schools still had to limit admittance (medical assistants, hairdressers, mehatronic).

Type of school/ year	2000/01	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Gymnasiums	37	39	34	28	25	30	10
Secondary technical schools	27	30	24	17	25	34	29
Secondary vocational schools	6	8	8	7	5	4	2

Table 5: Dynamics in the number of secondary schools which have limited admittance

In recent years we are noticing an increase in capacity (seats) at gymnasiums, so the number of gymnasiums that are limiting admittance is falling. But at the same time, there is an increase in the number of technical schools with limited admittance, particularly for professions where mainly women apply: computing, pre-school education, veterinary medicine, tourism, media, health care, design, cosmetics, pharmacy, dentistry. The admittance policy is therefore 'forcing' women to go to gymnasium, which is unfavourable especially for girls with lower study results or with wishes for a profession.

Women are privileged in secondary education, but their weakest element does not have a suitable offer in vocational education The position of women in secondary education is contradictory. On one side, women are prevalent in gymnasium, as the elite form of secondary education. In average they achieve better results than men, and by that they also have advantage in enrolling in tertiary education at the most desired fields of study, where there aren't enough places at faculties for everybody who wants to enrol (medicine, architecture, pharmacy, biotechnology, economics, some social sciences, some languages).



Picture 7: Dynamics of enrolment of girls in various types of secondary schools (data from archive of MES) (in the legend, NPI is missing, which is barely visible in the picture)

At gymnasium, the percentage of females is high above the average of their enrolment in secondary schools. The trend also shows that the percentage of females enrolling in gymnasium has been increasing in the past 5 years, the same as in 4-year technical schools (ISCED 3A) which lead to vocational matura; and in the same period it was falling in 3-year vocational education (ISCED 3B), where this year only 13% of women enrolled, and is half the size of enrolment in year 2003. These trends of 'escape' of novices from vocational educational sector to gymnasium is, coupled with the shock in birth-rates, very explicitly visible particularly for females. Only 93 women enrolled in the first year of lower vocational school this year, while 1419 enrolled in the first year of 3-year vocational education, out of the total number of 10.636.

This shows that there is no suitable programme offer for women at the level of lower vocational education. 17 programmes of lower vocational education exist, which are not all offered, and they are not equally available throughout the country. In 2007/08, girls enrolled only in three programmes in relevant numbers: house assistant (32 girls enrolled = 78%), assistant tailor (6 = 100%), assistant baker (43 = 60%). An additional problem is limitation of admittance to secondary technical programmes, which would attract young girls: computing, economics and administration, health care and medical care, cosmetics, pharmacy, dentistry, media, tourism, pre-school care, hairdressing, trade, cookery. Instead, females prefer to enrol in gymnasium. It is not due to prejudice about what are referred to as 'female' and 'male' professions, but because other profes-

sions are not attractive among youth anyway. That is especially understandable if we establish that with limited admittance to secondary technical schools, higher results have to be acquired at compulsory education (higher number of points) than to enrol in gymnasium which does not have limited admittance. With expansion of admittance to gymnasium, the government policy in the past years 'succumbed' to public opinion and educational values of population, which means that today there is probably no policy that would dare to change this ratio between gymnasium and technical school using limitations and repressive means. But everything else would require substantial changes in conditions which have led, in society – especially in economy and public services – in employment and valuation of work, to the current system of valuation of education among population.

To sum up the view on equity of vocational education in relation to women, it is shown that women are actually privileged in the current Slovenian school arrangement, as they achieve higher results with responsibility for work and learning, and by that the doors are more open to them to enter further levels of education. But on the other hand, there is obviously no offer in vocational education suitable for them; especially for those who are not very good at theoretical learning.

Discriminatory effects of economic, social and cultural factors

As the fundamental dilemma we have mentioned that the posed question cannot be analysed on the whole population, as we simply don't have adequate data for that. On the example of the project PISA (Programme for International Student Assessment), to which Slovenia was for the first time included in 2006, we get very interesting explanations of some questions. First, the citizens of Slovenia have accepted the news about achievements of our 15-year olds with pride. In the joint assessment of literacy in natural sciences, which was the central subject of measuring achievements in 2006, they achieved 12th place among 57 countries. Our 15-year olds were, as a rule, chosen from the 1st year of secondary education, so the sample was stratified and it included a proportional number of pupils from lower vocational schools, secondary vocational schools, secondary technical schools and gymnasiums. PISA showed for Slovenia a high level of dispersion (variance) of achievements, which is for Slovenia almost twice as high as the average of OECD, and so Slovenia is allocated to the high third place among the 57 participating countries according to the size of differences among achievements of 15-year olds. The high dispersion of achievements can be, evidently, to the greatest extent attributed to separation of pupils to different types of schools, which is not encouraging from in terms of equity of secondary education though, as it points to an assumption that in deciding for different types of secondary schools, and by that also of vocational schools, there is negative selection, which means that pupils with lower study results enrol in all forms of vocational education 3C and 3B, although of course we must not understand that relation causally. The basic duty and also challenge of any equitable school policy is to provide help for everyone to acquire quality knowledge and highest possible achievements. But

even more than that, we find it essential to stress that the level of school equity is mainly in reducing especially those factors, which reduce individual's success at school, which are not fault of theirs. Such are especially the factors arising from economic, social and cultural environment of an individual. Also from this perspective, PISA is unveiling a painful dimension of 'Slovenian' achievements. A relatively very high share of variance in achievements is, namely, explained exactly with economic, social and cultural background of pupils. In the countries participating in the project PISA 2006, economic-socio-cultural factors should on average explain less than 20% of dispersion of achievements, while in Slovenia the percentage is 46%. Within that, low achievements of immigrants also have strong effect. PISA defines status of an immigrant also for pupils, the parents of which are not born in Slovenia. In Slovenia we have approximately 10% of such 'second generation' immigrants. These pupils have, on average, lower achievements: not even 30% of second-generation immigrant pupils achieve the basic level of literacy in natural sciences, while there is only a bit more than 10% of such 'national' pupils. Besides that, PISA showed that children of immigrants in significantly higher percentage attend lower (3C and 3-year vocational education (3B)) than (3A) secondary technical education and gymnasium. This problem is complementary explained also by the fact that in Slovenia we have relatively high dispersion of achievements also within a particular school, whereby this dispersion is explained with economic-socio-cultural factors only in 0,3%. About other factors that could explain it (differences in abilities, learning capacity, motivation) we can only assume, as there are no data. But even just on the basis of the PISA project results we can form an additional assumption about high socio-cultural heterogeneity among different types of secondary schools, and about socio-cultural homogeneity within a particular secondary school, which directly speaks of social exclusion. PISA is also showing interdependence between education acquired by parents, and the school chosen by their children. The percentage of children of parents, whether it is the father or the mother, with uncompleted or completed elementary school, is highest in lower vocational school (30-38%) and is linearly decreasing, and in gymnasium amounts to 12-13%, and vice versa, the percentage of children of parents with gymnasium is highest in gymnasiums 36% and is decreasing towards lower vocational school, where it is only 8%. Also on the basis of the survey Slovene Public Opinion 2004, which was conducted on a representative sample, we can establish statistically high important connection between the acquired level of education of parents and children.

Answer to the key question and challenges for the future

How can we ensure that the government policy and its development strategies will be founded on databases and their analyses?

We cannot give a clear answer to the question how the less privileged social groups achieve European benchmarks in education, as there are no adequate

data. Slovenian legislation is restrictive in their collection due to *protection of personal data*. There is no information about candidates, not at enrolment, not during schooling, and not at completion of secondary education (at final examinations, vocational or general matura), which would enable monitoring of efficiency of education with regard to social, cultural, national, regional indicators, which is the basis for assessment of equity of the system. Sample surveys point more to the favour of a conclusion that educational system as a whole, and also vocational education, contribute to marginalisation of social groups, particularly with regard to their different economic, social and cultural situation, and of people with special needs. But due to the fact that there are no appropriate national databases, this conclusion cannot be confirmed on a national level. The key problem is that *in Slovenia, in politics as well as in the educational science, no relevant data is available to develop strategies on the national level to remedy unjustness in educational system. Without appropriate data, it is also not possible to implement the principle that the state is forming and developing its educational strategy on the basis of databases and analyses.*

How can we reduce effects of secondary education on social exclusion, and achieve higher equity in vocational education?

1. By increasing attractiveness of vocational education; modernising Slovenian vocational standards; developing modern professions, more attractive for young people and suitable for their different abilities, and more suitable to modern development of work. A dialogue of traditional partners in vocational education, chambers of commerce, and associations and trade unions has to be developed. Strengthening activity of trade unions in the elements which could significantly contribute to more appropriate valuation of work and professions at lower levels of education (3C, B) with activities for development of modern supply of work, with higher initiative, less hierarchy, less routine work, more independence and more responsibility, higher level of inclusion; in short, for work which requires higher quality of knowledge as opposed to routine.
2. By preparing a more diverse offer in vocational education, especially for girls, by developing alternative forms and paths to acquire vocational and technical education; by achieving higher alternation between work and education, schools and companies, and by putting higher consideration on informal education.
3. By reducing or abolishing the rigid structure of types of vocational and technical schools; by reducing institutionalisation or removing some current forms of differentiation in technical and vocational education; by studying the possibility to form, for a certain branch, a *model of joint 3-year vocational and technical school, increase selectivity of study subjects, by connecting current activities for renovation of programmes also with planning* of well-structured educational standards which enable entrance to employment with regard to how demanding professions are and what the

capacities of population are, and to *ensure, on the principles of integration, appropriate learning help to persons with lower learning capacity and persons with special needs.*

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