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Striving for innovation in VET in Slovenia

1 Vocational training and qualification system

The development of VET in Slovenia between World War II and the beginning of the transition of the 1990's was characterised by a shift away from the dual system in which private employers played an important role. This was understandable because the private sector of small producers was marginalised by the confiscation of private property, administrative barriers to private entrepreneurship and the growth of state-owned industry. Relatively simple production technology was used in the newly growing industrial plants, involving mainly unskilled and semi-skilled jobs for which little training was needed. Economic and technological restructuring generating jobs requiring a higher level of skills proficiency was delayed. The limited skills required for simple industrial jobs could either be acquired in school workshops or within the work process when new employees were recruited. School-based VET was simpler to organise, easier to plan and cheaper for both the state and enterprises than the dual form. The other trend was a gradual merger of vocational and general secondary education, which was particularly accentuated in the 1980's.

In the first years of transition the distinction grew again between general and vocational education and training. Finally, this was codified in 1996 in the new education legislation (www.mszs.si/eng/). The key characteristics of the newly established system are increased centralisation and a greater choice of education and training possibilities. As can be seen in Figure 1 there is, on the one hand, a general school the *gimnazija* preparing students for university studies and, on the other, the dual system providing training for the different vocations needed in small craft workshops and industry. In between, one can chose 'vocational *gimnazija*', technical schools which provide school-based vocational training.

After completing 4 years of secondary education one can then continue to study at the new vocational high schools (The Education, 2000). In addition, those who complete general secondary education and do not continue their studies can take short term vocational training in order to increase their employability for jobs such as bank tellers, sales persons, and insurance agents. One could say that this is an over-abundance of choices for a small country in which the annual cohort of 16 years old youngsters numbered over 30,000 two decades ago, but has subsequently fallen to about 17,000 (SO, 2003).

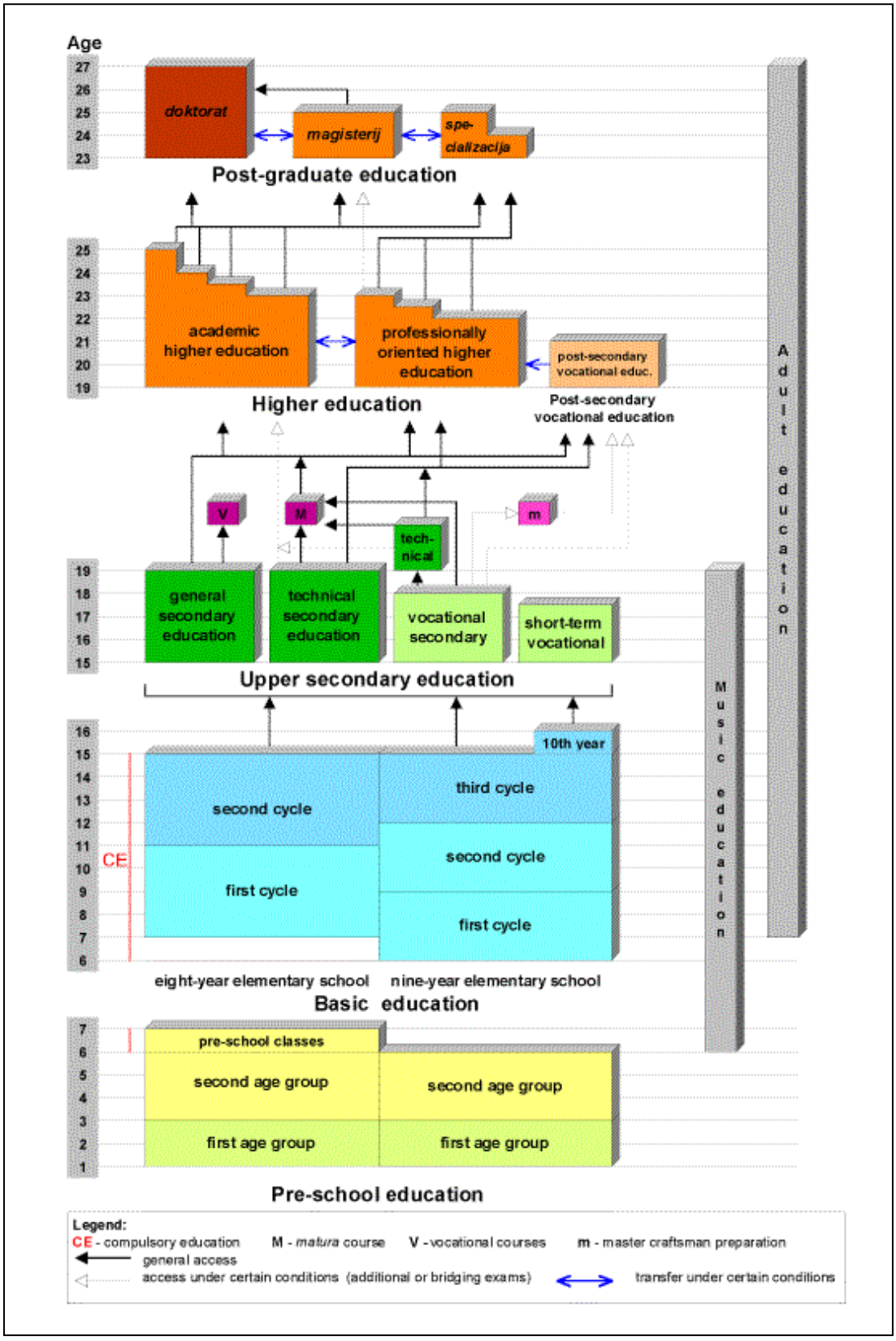

Figure 1: The Slovenian Educational System

Particular attention has been paid to the partnership-based vocational system, the school-based and the dual ones, for four inter-linked reasons:

- the strong influence of the German and Austrian education and training traditions,
- nostalgia for the lost dual system in place before and in the first period following the Second World War,
- the increasing influence of the private sector, especially small entrepreneurs and craftsmen, who demanded it through their Chamber of Crafts; and
- the increasing needs for skilled labour brought about by economic and technological restructuring.

It was also felt that the education and training system in its traditional form would not be able to cope with the increasing and changing demands for skills and competencies. Consequently, with the aim of promoting life long learning and recognition of prior learning, the Ministry of Labour, Family and Social Affairs assembled a group of experts to prepare the Law on National Vocational Qualifications (NVQ) (Zakon, 2003), which was passed by parliament in autumn 2000. The purpose of this law is to determine the procedure for developing and verifying national vocational standards and, in particular, to enable the public recognition of informally and non-formally acquired knowledge and skills to those individuals who meet these standards. National vocational standards also serve as a basis for the preparation of VET programmes. In principle, then, there are three routes to the same qualifications: (a) formal education and training in the school or (b) in the dual system (in some cases both ways are provided) and (c) the certification of prior knowledge. Since VET programmes are usually prepared on the basis of more than one vocational standard, individuals with certain publicly recognised qualifications based on some of these standards can bring these to school where they should be recognised if they are included in the VET programme one seeks enrolment in. Similarly, knowledge acquired in the school should be taken into account in the process of certifying national qualifications if one prematurely leaves a programme. However, certified qualifications do not automatically lead to higher educational grades. For this, some education in the school with the accent on general education is needed. Thus, school-based and dual vocational education on the one hand, and the system for certifying non-formal and informal learning, on the other hand, complement each other.

Implementing the Law on NVQ took two years, partly because several new institutions were needed to make it work and partly because efforts were undertaken to settle the cost issues raised by employers and trade unions. Among the institutions that comprise the system of NVQ there are:

- National Council for Vocational Training (NCVT), the supreme partnership body composed of representatives of employers, trade unions and the state
- Centre for Vocational Training (CVT), the main national professional institution in the field

- branch boards for national vocational standards, who examine the initiatives for new standards and for revision of the existing ones, propose lists of experts for relevant vocational fields, etc.
- licensed institutions that assess prior knowledge and award national qualifications to individuals, e.g., chambers of economy and crafts, school centres, adult education centres, large companies, etc.
- lists of branch experts appointed by the employers' and trade unions' organisations, trained and certified as examiners for the assessment of prior learning
- advisors to individuals who decide to apply for certification located mainly in the licensed institutions
- register of awarded qualifications
- mechanisms to monitor, control and evaluate the system.

In 2003 the system was made fully operational. By the end of 2004 over 130 new standards have been accepted, in addition to the approximately 220 existing ones, and 39 institutions have been licensed to award NVQs. Over 2,200 national vocational qualifications have been certified and awarded in fields such as pharmaceutical processing, electricity switch board operators, counsellors for transportation of dangerous goods, drivers, home page designers, home carers, specialised farm producers, bee breeders and so on.

The Slovenian qualification system functions along the following lines:

- Anybody can initiate a new qualification standard. Most frequently this is done by employers, schools and professional groups.
- The initiative is examined by the CVT experts who, in co-operation with employers' branch boards, support or reject it. The initiative is judged especially with respect to its novelty in comparison to the existing standards, with respect to its labour market prospects and with respect to the EU countries' qualification frameworks.
- If the initiative is approved, CVT elaborates a new standard. Social partners' experts are involved in the procedure.
- The proposal for a new standard is discussed by the Board for Vocational Standards, which is a body of the NCVT (both composed of social partners), which approves it.
- A new standard is signed and published by the Minister of Labour.
- When published a standard serves as a basis for certification of national qualifications. For this purpose CVT elaborates an examination catalogue, which is approved by the NCVT. Training institutions may offer teaching programmes and instruction on an informal basis in order to help individuals prepare for the certification of national qualifications.
- The same standard serves also as a basis for elaboration of a public teaching programme if it is considered to be justified. A public programme is prepared along similar procedure as a qualification standard. To economise in the educational system, and to provide for wider

education and training, one programme is often prepared on the basis of more than one standard. In such a case, the programme should be modular in order that students get rounded up knowledge/qualifications in case that they quit the programme prematurely.

- Public teaching programmes are signed and published by the Minister of Education after NCVT accepts them. It is the Ministry of Education which decides which schools run a certain programme in order to produce regionally and vocationally balanced education opportunities provided by the public educational system.

Initially, national qualification standards were elaborated primarily through employers' and schools' initiatives without paying much attention to the national qualification framework. This has lead to certain imbalances in terms of abundance of standards and programmes in some fields and insufficient coverage in the other ones. For example, there has been a lack of initiative of standards and programmes for the emerging service sectors and the use of new technologies. This is why a more holistic and innovative approaches are now being sought for the development of standards within the national qualification framework.

2 Recent developments and VET issues

In spite of the education and training system reform in 1996, and the curricula reform that followed, the development of VET has not reached the desired goals. Furthermore, there has been a permanent and ongoing discussion about how VET should be shaped.

A critical review of the VET system conducted by several Slovenian and foreign experts in the framework of the Phare programme (Phare MOCCA, 2000) in the period 1999-2001 and guided by the European Training Foundation (ETF), revealed that:

- The education and training system in Slovenia including VET was too centralised and regulated in detail at the national level. Therefore, VET's responsiveness to employers' needs was quite low and the related adjustment time too long.
- VET programmes remained very traditional and composed of three blocks: general subjects such as mathematics, physics, foreign and mother languages, history and geography; vocational subjects providing knowledge in specific vocational fields; and practical training in school workshops and/or with employers. These blocks were poorly linked. The so-called subject structure of curricula and frontal didactic methods of teaching did not provide the necessary integration of knowledge and the development of either key or occupational competencies, such as an ability for problem solving, communication and learning skills. This reduced motivation for learning.
- VET programmes were prepared primarily for youth. Their implementation was not adjusted to adults, who could rarely afford to go to school without a break for three or more years. In addition, the knowledge and skills acquired outside formal education were not recognised either publicly or in the school.

- Although the dual and school-based programmes led to the same vocational qualifications, graduates in fact acquired different knowledge and competencies upon their completion.

The impact of the evaluation by the Phare MOCCA Programme was that the National VET Council decided to prepare new guidelines for developing VET programmes, which were accepted in autumn 2001 (Izhodišča, 2001). The new Guidelines demand significantly different curricula planning and teaching in the VET area. The four main changes are as follows:

- Opening up of the curricula whereby approximately 20 per cent of VET programmes should be left undefined at the national level, so as to be elaborated by schools themselves in collaboration with their regional and/or branch partners. The aim is to adjust programmes to employers' needs while keeping certain common standards, and to let them change more quickly without time consuming procedures at the national level.
- The provision of integrated knowledge and skills in order to enable students to develop the competencies needed for problem solving in real work and life situations. This includes leaving the model of subject structured curricula with the aim of creating a number of learning situations in which practical training and theoretical explanation is given simultaneously. This is expected to motivate those students not motivated for frontal didactic lecturing in the classroom.
- Modularisation of teaching programmes whereby there should be one module for each vocational standard that a programme is based on. Modularisation should enable students, especially adults, to undertake a step-wise education, to enter and leave a certain programme without losses, to combine modules, to certify knowledge acquired in the school, to bring certified qualifications into programmes and later continue education.
- Abolition of the differences between programmes used in the dual and school-based systems. The standards should move closer to the dual system, which has a greater accent on practical training.

To make Guidelines work, a special implementation programme was launched by the Ministry of Education, Science and Sport (MESS). Several groups of Slovenian and foreign experts, in collaboration with pilot schools, focused on specific development issues. The crucial role is played by the schools that are interested for change and for investing their time, energy and experiences in further development of VET. MESS financially supports their efforts. On the basis of reform endeavours from the past it has become clear that top-down changes are rather limited and are fraught with implementation problems.

The pilot schools first of all develop their implementation curriculum. This means that together with their local or/and branch partners they determine the nationally undefined 20 % of the chosen programme. As the first cases show, the fear that they would decide primarily for short-lasting pragmatic skills has not been justified. For example, some decided for additional foreign language, and some for additional general education classes in physics or

history. This also means that a programme leading to certain qualification(s) may differ from one environment to another. Schools also make arrangements for practical training of their students directly with the employers in their regions.

Second, teams of teachers prepare detailed work plans on how the teaching process is carried out. This involves organisation of a teaching process organised in modules leading to predefined qualifications, creation of various learning situations, formation of teaching teams, and adjustment of general subjects to the vocation in question. For example in a car maintenance programme should present history from a transportation and car development perspective; foreign languages should not be taught only in the class room but also in the process of practical training where students learn technical words, how to make technical reports and how to communicate with foreign clients; certain chapters of physics could be explained when students are acquainted with the construction and functioning of car engines, and so on.

Third, teachers have been trained for their new development roles. Often they form inter-disciplinary teams whose members come from different schools. It is believed that the achievements of the teaching process depend much more on motivated and trained teachers than on the formal programme itself. The most important is that teachers from the pilot schools act as trainers conveying their experiences to the others.

A special team is developing a new model of lump sum financing which should replace the current highly centralised financing system according to which every teacher is paid directly by the Ministry according to a predetermined number of hours of teaching. The new model should allow for greater flexibility in organisation of a teaching process and in assignment of teaching and other work duties.

The programme of car servicing has been launched according to the new Guidelines in the school year 2004/5 as an experimental one. Four more programmes for mechatronic operator, operator in graphics, car body maintainer and hairdresser, will be implemented in the school year 2005/6. It has been agreed that a permanent monitoring of novelties, information feed back and eventual corrections of programmes and their implementation procedures will be established. It has become clear to the majority of the experts involved that one cannot jump from one reform to the other but that a permanent monitoring, development and adjustment to of the changing environments are needed. This is possible only by using a bottom-up approach in which schools and their teachers increasingly play a development role. The other central institution in this process is CVT with permanently employed experts.

3 Discussions on VET

Implementation of the new approach has been far from easy. The first obstacle is the lack of knowledge and experience with modularisation and alternative non-subject-structured curricula planning. It is easy to modularise programmes in terms of breaking them up into smaller parts. However, if these parts are to give students certain rounded competencies that

can be used in real work situations before the whole programme is finished, the task becomes much more difficult, and organisation of the teaching process more complicated. It is even more difficult and unusual to merge traditional subjects into a problem-structured curriculum.

The second obstacle is even more delicate. There has been strong opposition from the side of 'generalists' who claim that the new approach sacrifices general and reflective knowledge in favour of functional skills and competencies, which in any case change quickly and do not enable students to continue their education (Muršak and Vidmar, 2001). Their campaign against the new guidelines is quite strong, although for the moment the change in the VET system only applies to the 3-year vocational programmes and leaves the 4-year technical programmes almost untouched. It is difficult for the critics to accept the argument that youngsters enrolled in VET programmes have relatively low motivation for general subjects and that general knowledge could be better conveyed in the form of key competencies (Key Competencies, 2002) and by means of problem solving, role playing or other methods of the integrated approach. It seems that teachers of general subjects are afraid of losing their jobs and eventual retraining.

There are some doubts also about the nature of partnership to be established between schools and employers. Originally the idea was to have local or regional networks that are supposed to link the main employers of graduates coming out of vocational schools. However, in Slovenia the labour market is small and in many cases education and training of certain vocations is carried out in just one or two schools. In such a case, representatives of country branch associations seem to be more relevant partners. The question is also who should bear the responsibility for the partnership. Are schools themselves capable to bring together social partners effectively, should employers' associations be authorised to do this, or should the state intervene more directly? In the case of pilot schools the initiative for partnership is in their hands. This works well in the regions where joint efforts of schools and employers have been traditional. It is much more difficult to build partnership networks anew, especially in the surroundings with new employers who have not yet observed the imperfections of the labour market.

The Slovenian education and training system has been highly centralised in the period of transition. This is particularly so in the case of its financing. Although there is a will, except from some officers in the Ministry's administration, to go in the direction of lump sum approach, which would allow schools to raise additional resources, the shift seems quite demanding. Many school principals are not ready to take higher financial and organisational responsibilities. Employers think that their contribution via paying taxes should be sufficient and are reluctant to contribute directly additional resources. They also permanently bargain about the cost of training places, which they think should be covered by the state.

If the new approach is to expand then teachers will have to change their traditional way of teaching. The sceptics point at this issue as most important. It is easy to work with highly motivated teachers and principals of the pilot schools who receive additional resources for their participation in the experiment. It is another story when the change is introduced

generally, when it becomes an obligation for everybody and when all the teachers should be retrained. Therefore a stepwise approach seems reasonable. No programme should be allocated to unprepared schools.

The network of vocational schools in Slovenia is rather dispersed meaning that there are several small schools, which have difficulties engaging good teachers and especially justifying investments into training equipment and workshops. This issue is increasingly pressing in the light of the falling number of students. One of the responses has been a foundation of inter-company training centres. However, further measures seem to be needed to integrate small vocational schools into bigger school centres capable of maintaining a development function, investing in expensive training equipment and sharing the expertise of their staff.

4 VET and the world of work

Along with endeavours to reform the VET system in line with the changing labour market demands, figures showing interest in VET and enrolment in VET programmes are far from encouraging. Throughout and after the 1990s, a shrinking share of young generations has been going to vocational and technical schools and the trend towards enrolment in general education has been strengthened as shown in Table 1. Vocational schools are cutting the number of groups/classes and they recently started to reorganise the teaching process so that they merge the groups of students enrolled in different programmes when they have the same and sometimes also similar lectures in the schedule.

Table 1: **Changing structure of students in secondary education in Slovenia in the 1990s (in per cent; source: Cek and Vranješ, 2003)**

TYPE OF SCHOOL	1995/96	1999/00	2002/03
Gimnazija - general	21.7	32.5	36.2
Technical school – 4 years	36.3	29.8	32.8
Vocational school – 2-3 years	42.0	37.8	30.9

The Minister of Education and Sport of the new government, which has been in power since the end of 2004, has observed this trend and expressed his determination to stop or even reverse it. This seems understandable in the light of economic growth and demographic decline, which in the mid term lead to the shortages of labour. The first measure was to decrease the number of available places in Gimnazija. If this measure turns students from general programmes, social sciences and humanities to vocational and technical programmes it may contribute to a more balanced labour market in the future. However, if it decreases the aspirations of youth for higher education achievements its effects are problematic in the light

of comparatively low percentage of the labour market active population with post secondary education (17 %).

There could be several reasons that explain the shift away from vocational training (Svetlik, 2004):

- The first is the low valuation of manual occupations, which is deeply embedded in the culture. It has not changed in spite of the new technologies applied in several occupations, which make work easier and more interesting.
- The consequence of upward mobility is that jobs and occupations at the lower levels of the occupational scale are taken by immigrants and marginal groups. Many occupations of this kind in Slovenia can be found in the fields of construction, mining and public utilities (ESS, 2003). The local population's interest in training in the respective programmes is very low.
- The third factor gained momentum especially in the period of transition. The Slovenian economy, which used to be highly industrial, is changing into a service economy as shown in Table 2 (Ignjatović, 2002, p.180). This change is associated with the breaking up of several companies in the metal, textile, wood-processing and other industries. It has given a strong signal to youngsters and their parents which schools not to chose. Vocational programmes leading to technical qualifications in the textile, leather, metal and similar industries are therefore losing students, while those leading to service qualifications such as hairdressers, salespeople and administrative workers remain attractive.
- One should not neglect the influence of the growing labour market and employment flexibility. Vocational training has frequently been described as too narrow and specialised providing a weak basis for mobility between jobs in the turbulent labour market. There is a prevailing opinion that general education gives individuals better opportunities for alternative careers when the existing ones are broken.
- On the supply side, an important factor influencing the shrinking interest in vocational training is demographic decline. The numbers of youth entering secondary education fell by 13 per cent in the period 1995/96 to 2000/01 (Cek andVranješ, 2002). Because the supply of education and training programmes has not changed significantly and the number of teaching places has not dropped, the competition for students is being won by the more prestigious *gimnazija*.
- The dual system, as part of VET, has also not attracted as many students as expected. Although intended to become the dominant form of vocational education and training (Medveš, 1999) this has not happened. According to Meglič (Meglič, 2003), a main reason the dual system does not meet the expectations is the competition from the school-based one. Since students can acquire the same qualification in both ways, schools deliberately discourage them from opting for the dual system. In the school-based track there is more time for teaching in the classroom and thus more jobs for teachers. If general

schools successfully compete for students with vocational ones, then vocational schools focus their competition on the dual system.

Table 2: **Distribution of the labour market active population in Slovenia according to industrial sectors in the period 1931 – 2000 in per cent (sources for 1931 and 1971: Kramberger, 1999, p.160; for 1991 and 2000: Ignjatović, 2002, p.180).**

	1931	1971	1991	2000
Agricultural	61	26	15	11
Industry	21	34	45	38
Services	18	40	40	51

The criticism of the vocational schools has also been that they represent *gimnazija* at its lower point, where training for vocational competencies is rather weak. VET schools are seen rather as institutions to motivate and prepare youngsters for further education than to provide for their employability. In addition, teaching methods have in fact not changed significantly. It is unlikely that young graduates who had entered VET schools as 'the rest of population with lower general abilities' would be able to cope successfully with real work and life situations if these situations are not simulated and reflected upon during the teaching and training process. Insisting on subject structured curricula means that students receive systematic knowledge in mathematics, physics, languages, history, geography etc. However, real work and life situations are usually composed of complex problems to be addressed by a combination of knowledge and skills of various disciplines simultaneously. How can one expect a young graduate to be successful in this if the school he/she attended was not able to demonstrate it?

It seems that the trends towards higher education levels and towards service occupations are very strong. They are not only supply- but also demand-driven. The educational achievement of the labour market active population in Slovenia is low compared to the educationally more advanced EU countries. In 2002 only 17 per cent of the working-age population (15 – 64 years) had a tertiary (ISCED 5-7) education (Cek and Vranješ, 2003). Slovenia's most important economic partner Germany had 23 per cent, while the Nordic countries and Ireland had significantly better (www.oecd.org/edu/eag2003). If the Slovenian economy wants to compete successfully with others its workforce must be able to receive and work effectively with the most advanced technologies and provide for the effective organisation of economic and social life. The shift from industrial to service occupations also seems natural. VET should take these trends into account and can only adjust to them.

A good response of the VET system to this trend to higher education is to make transition in the system as easy as possible. Such is the case with the so-called 3+2 system. Students who complete a 3-year vocational programme can continue with technical education in the

following two years, and a large number of vocational graduates take up this option. Another possibility for upward mobility is offered by post-secondary vocational schools, which in 2001/02 enrolled more than 6,000 students (Cek and Vranješ, 2003). If these students take the so-called vocational maturity exam some university programmes are also opened up to them.

Irrespective of the general trend to more demanding jobs and higher levels of education, some occupations at the middle level of proficiency will still be needed. Among those some traditional ones, such as goldsmith, thatcher, gardener, and confectioner, will be needed in the tourist industry if not to meet the population's everyday needs. New ones are also emerging, such as a home care provider and the maintainer of audio and visual equipment. The Chamber of Crafts has started a campaign, in co-operation with the Ministry of Education and Sport, to make these occupations more visible, to show their interesting sides to potential students and to inform them of employment possibilities.

VET schools are expected to make a special contribution to lifelong learning. They will have to open up to the domestic adult population and to immigrants. This offers a chance to compensate for the loss of young students. However, the approach and teaching methods should then also change. Modularisation of programmes and more integrated problem-focused teaching are just two of the changes required. The possibilities of this training are confirmed in post-secondary vocational colleges, where nearly two-thirds of students are adults (Cek, Vranješ, 2003). Offering courses to the unemployed is another example.

References

Cek, M. and Vranješ, P. (2002). Poklicno in strokovno izobraževanje v Sloveniji 2001 (Vocational and Technical Education in Slovenia 2001). Ljubljana: National VET Observatory of Slovenia.

Cek, M. and Vranješ, P. (2003). Modernisation of Vocational Education and Training in Slovenia 2002. Ljubljana: National VET Observatory of Slovenia.

ESS (2003). Employment Service of Slovenia, Annual Report.

Ignjatović, M. (2002). Družbene posledice povečevanja prožnosti trga delovne sile (Social Consequences of the Increasing Labour Market Flexibility). Ljubljana: Založba FDV.

Izhodišča (2001). Izhodišča za pripravo izobraževalnih programov nižjega in srednjega poklicnega izobraževanja ter programov srednjega strokovnega izobraževanja (Guidelines for the preparation of programmes for lower and middle vocational education and for programmes of technical education). National VET Council of Slovenia.

Key Competencies (2002). Eurydice.

Kramberger, A. (1999). Poklici, trg dela in politika (Occupations, labour market and politics). Znanstvena knjižnica, FDV Ljubljana.

Medveš, Z. (1999). Ugotovitve in ocena stanja pri izvajanju dualnega sistema poklicnega izobraževanja (Observations and evaluation of the dual VET system). In: Meglič, J., Jančar, V.,B. (eds.). Dualni sistem danes za jutri (Dual system today for tomorrow), Obrtna zbornica Slovenije (Chamber of Crafts of Slovenia), Ljubljana.

Meglič, J. (2003). Vpliv dualnega sistema poklicnega izobraževanja v republiki Sloveniji na zaposlovanje mladih (The influence of the dual VET system in the Republic of Slovenia on the employment of youth). Master's degree thesis, Faculty of Social Sciences. Ljubljana.

Muršak, J. and Vidmar, T. (2001). Čemu rabi splošno izobraževalni del v srednjem poklicnem izobraževanju? (What is general education in secondary education needed for?) Sodobna pedagogika št. 5.

Phare MOCCA (2000). Modernisation of Curricula, Certification and Assessment in Vocational Education for Youth and Adults. Ministry of Education and Sport of Slovenia.

SO (2003). Statistical Yearbook 2002. Statistical Office of Slovenia.

Svetlik, I. (2004). Adjusting to the falling interest in VET in Slovenia. European Journal of Vocational Training, September-December, No33 (in print).

The Education (2000) The Education System in Slovenia. Ministry of Education and Sport.

www.mszs.si/eng/ - home page of the Ministry of Education, Science and Sport of Slovenia.

www.oecd.org/edu/eag2003

Zakon (2003) Zakon o nacionalnih poklicnih kvalifikacijah (The Law on National Vocational Qualifications). Uradni list, No 83.