

International comparability of the outcomes of the Slovenian education system – national versus international classification of education

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1 Introduction

Looking at the Slovenian education system in a comparative perspective, one can establish that it resembles the main features of the traditional continental educational systems. Like most educational systems it is constituted of four levels: pre-primary, primary, secondary and tertiary. However, the way how individual sectors are structured and how education is provided, assessed and recognised by the society is closely connected to the national tradition and to the actual social and political context of the country. According to the main value system and ideological principles of the socialist ideology in the former political system, schooling was above all geared to the development of the industrial working class. Taking into consideration the developments after the WW II up to the beginning of the 1980s, general and vocational education were organized in separate tracks. The apprenticeship system was characteristic of secondary vocational education and training. However, a major educational reform enacted in 1981 invoked far reaching changes whereat secondary education and training was most strongly affected. A unified school-based system of education and training of youth and adults was introduced. At the secondary level, the division between vocational and technical education leading to employment on the one hand, and general education preparing pupils for university studies on the other hand was abolished. Education and training programmes were designed so as to provide a double qualification, for the labour market and for continuation of education at the tertiary level.

Education was entirely school-based; schools were also responsible for the provision of practical training. The idea behind all these changes was an ideological one: a socialist system was not supposed to facilitate formation of elites; after a completed secondary education everyone should have the opportunity to choose between entering the labour market and continuation of education at a higher level. The new system called '*career directed education*' was strongly criticised by some critical educationalists as well as employers. The former blamed it for not providing a solid basis for university studies which resulted in low completion rates and in the deterioration of the quality of outcomes at the tertiary level. The latter on the other hand criticised that young people coming from school did not dispose of skills and competencies needed to be fully productive at the workplace. Actually the sys-

tem was designed so that productive skills and competencies would have been learnt in the work place *after* schooling. To this end an internship system was established for those on transition from school to work. The internship lasts from 6 months to one year, depending on the completed education programme.

Some changes of this new system were already introduced at the end of the 1980s; for instance, employers from the craft sector initiated more practice-oriented vocational programmes, the so-called “craft programmes”, secondary general programmes (gymnasiums) were gradually returning to schools. Since the beginning of the 1990s an overall educational reform has been carried out. In 1993 a new law on higher education passed the Parliament while in 1996 the whole package of school laws covering pre-primary education, primary education, secondary general education, secondary vocational and technical education and adult education as well as an umbrella law regulating organisation and financing of education was adopted. In this paper some main features of the current structure of the Slovenian educational system together with main characteristics of enrolment are presented. Furthermore, on the basis of the relation between the Slovenian system of classification of education and the ISCED-97 the international comparability of educational outcomes is discussed.

2 The structure of the Slovenian educational system by educational levels

The structure of the Slovenian system of education and transitions between the programmes are shown in Figure 1. In the following sections, the main features of each type of programme are described briefly.

2.1 Pre-primary, primary and secondary education programmes

In 1996, reforms of pre-primary, primary and secondary education were enacted. With the independence of Slovenia, daily child care and preschool education was removed from the social protection sector and placed within the ministry for education and sports. The educational reform strongly accentuated the role of preschool education in making up for inequalities of children stemming from different socio-economic backgrounds, especially with regard to the development of their abilities. Children under three years of age are placed in crèche groups, those between the age of three and six are placed in preschool groups. Full-time, part-time and shorter programmes of preschool education are offered. The most widely implemented are full-time programmes. Shorter programmes are meant for children from 3 years of age to the time of enrolment in primary schooling.

Primary education was extended from 8 to 9 years, starting at the age of 6 and lasting to the age of 15 (Primary Schooling Act, 1996). It finishes with an external ex-

amination. Until 2006 the results of the external final examination played an important role as the entrance criteria in gaining access to various types of secondary education programmes.

At the level of secondary education, the vocational and general stream have been reintroduced (see Ministry of Education and Sports, 1996). Since one of the main goals of the reform was to make the outcomes of the educational system more relevant for the employment system, special attention was directed to the reform of the vocational and technical education system. Among the main systemic measures providing for the realisation of this goal the following can be mentioned:

- introduction of shared responsibility of the state and social partners (employers and trade unions) for the VET system;
- introduction of the dual system in 3 year vocational training;
- VET programmes are based on occupational standards prepared by the economy.

To improve the attractiveness of the VET programmes for young people, some intermediary programmes were introduced that enable transition to some forms of higher vocational and professional education. Among the basic principles guiding the reform of the VET system was that no training programme should be a dead end programme; each one should offer an opportunity for one's career development.

The following types of education and training are provided at the secondary level:

- Lower vocational education
- three-year secondary vocational education
- Secondary technical education
- Secondary general education
- Vocational-technical education
- Professionally oriented general education
- Maturity course
- Vocational course
- Master craftsmen, foremen and managerial examinations (Ministry of Education and Sport, 1999; Ignjatović et al., 2003).

Lower vocational education programmes are of two- to two-and-a-half-year duration. They consist of theoretical and practical parts and provide a qualification for skilled workers' assistants; they finish with a final exam. Pupils can enrol in short-term vocational programmes after finishing primary education. However, also those pupils who do not finish primary schooling successfully can enrol if they completed at least 6 classes and thus fulfil the basic legally compulsory education requirement. After completing a short-term vocational programme, pupils can enter the labour market or continue education in the first year in any other (upper) secondary vocational and technical programme.

Three-year secondary vocational programmes are intended to provide qualifications at skilled workers' level for work in the industrial, crafts and service sectors. These programmes can be provided by vocational schools or in a dual system in the form of apprenticeship.

The introduction of the dual system is often mentioned as one of the most important innovations in VET in Slovenia, especially in the light of linking education and work. The weight of theoretical (school-based) knowledge and practical training is 40% and 60% respectively. The theoretical part of a programme is provided by schools, whilst the majority of practical training is provided by enterprises. The dual system and the school-based programmes end with a final exam testing both theoretical and practical knowledge and skills and provide formally equivalent outcomes. The practical part of the exam is carried out by the Chamber of Commerce and the Chamber of Crafts.

The current situation reveals that the development of the dual programmes has been rather supply-led so far, creating a certain oversupply of programmes beyond what is currently demanded by both students and firms (Medveš, 2000). The traditional form of the apprenticeship has been dying out and new forms of integration of work and learning are encouraged.

Secondary general schools in the form of the gymnasium were re-established at the beginning of the 1990s. All general education programmes last four years and are completed by an external maturity exam.¹

The professionally oriented gymnasium programme is a general secondary school programme incorporating a professional field module, ending with the maturity exam and thus also leading directly to university studies. It is designed as part of the general educational stream and introduces theoretical professional subjects into general education. Around 70% of the curriculum of the professionally oriented gymnasium programmes is the same as the general gymnasium programme.

After passing the maturity exam, students can directly enrol in higher education studies. General secondary school graduates have also an option to enrol in a post-secondary vocational course and obtain a vocational title.

Secondary technical education programmes last four years. Technical programmes, leading to technician and middle management positions in different occupational fields, are primarily designed as a preparation for vocational and professional colleges. Secondary-school graduates can enrol directly after passing the final examination or, more recently, the vocational maturity which is partially externally per-

¹ Matura (the maturity exam) is an external (state) exam for all students finishing gymnasium. The maturity exam is run and controlled by the State Examination Centre. It consists of five subjects: three subjects are compulsory (the mother tongue, mathematics and the first foreign language) and two are optional.

formed. However, they often find jobs with a broad profile also requiring theoretical knowledge of a specific field.

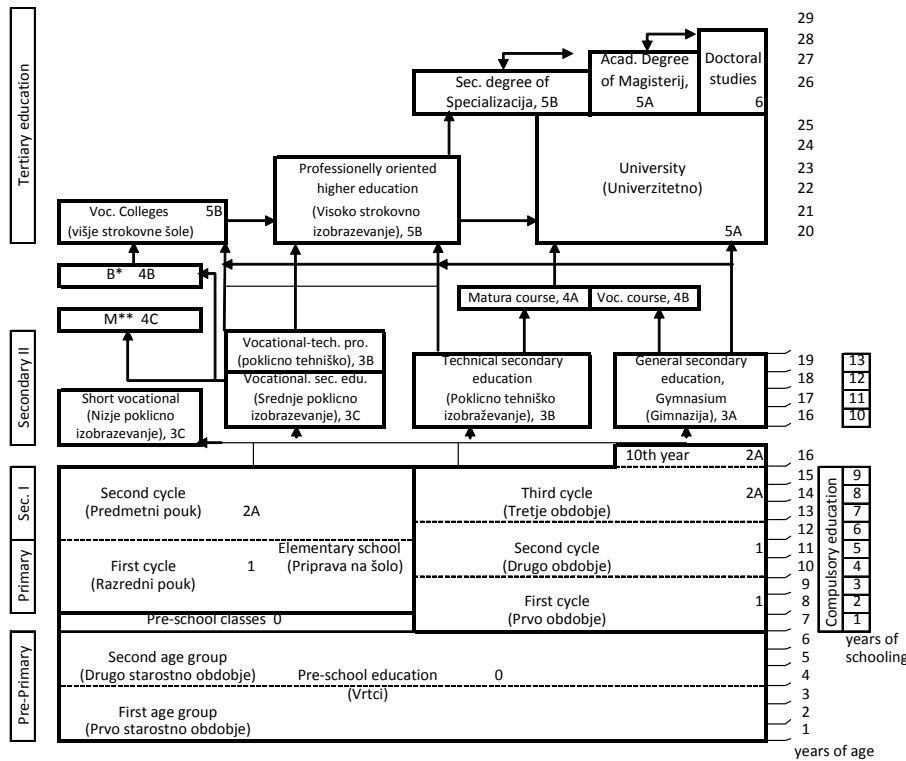
Vocational-technical programmes – graduates from a three-year vocational education programme can enter the two-year vocational-technical programmes which end with a vocational maturity. These programmes lead to qualifications at the level of a secondary technical school. They also provide the possibility of continuing studies at higher professional schools. In fact, vocational-technical programmes are an alternative to 4 year technical programmes.

A *maturity course* has been designed for graduates who have passed a final examination but who wish to enrol in academic tertiary studies. This course prepares them for sitting the maturity examination.

Vocational course represents a transfer possibility from the general education stream to VET (vocational education and training) and has been introduced to provide secondary school graduates who do not want (or in most cases have no direct access to) university education with an additional vocational qualification to enable them for entering the labour market.

Master craftsmen, foremen and managerial examinations provide a vertical progression route within the dual system. The examinations are the responsibility of the chambers (Chamber of Crafts for master craftsmen examinations and Chamber of Commerce and Industry for foremen and managerial examinations). According to the legislation on crafts, any person who wants to run own craft business is obliged to pass the master craftsmen examination. Also the tutors of apprentices have to pass these exams. As a condition for applying for master craftsmen and foremen examinations, a completed three-year vocational school is required and a minimum of three-year work experience or a post-secondary vocational college with at least one year of work experience.

Figure 1. The Slovenian educational system



2.2 Higher education

Before the 1990s, the Slovenian system of higher education was organised in three stages: i) shorter two-year university programmes (first stage of higher education) and two-year higher vocational programmes; ii) four- and five-year university programmes (second stage higher education), and iii) postgraduate programmes that included professional specialisation, masters degree and doctoral degree (third stage higher education). However by the end of the 1980s, the first stage programmes mostly died out. In the first half of the 1990s a reform of the higher education system was implemented. The main purpose was on one hand to improve the quality of higher education and bring it more in line with the employment and on the other hand to make it more internationally comparable.

The law on reformed higher education (1993) retained *university education* largely unchanged, but in addition it introduced *three-year higher professional education*. University education is oriented to academic work (scientific research). It com-

pletes with a university diploma (bachelor degree) and enables direct enrolment in postgraduate studies (specialisation and master programmes), and most recently to doctoral studies.

Higher professional education is intended for the labour market. The emphasis is on cooperation between higher education institutions and enterprises in carrying out education programmes. It completes with non-university diploma (higher education non-university degree).

The higher education reform opened up the opportunity for the establishment of private higher education providers. Quite a number of higher professional schools were established with the support of some larger enterprises.

Like other EU countries Slovenia is also involved in the process of the Bologna reforms – which is about to bring significant changes into the structure of higher education. The new higher education act that passed in 2004 enacted the following structure of higher education:

- first stage higher education including higher education non-university and university studies (undergraduate studies),
- second stage higher education encompassing masters' studies and specialisation, and
- third stage higher education with doctoral studies.

In 1996 also *two-year post-secondary vocational colleges* were introduced in the VET system which to a certain extent replaced two-year higher professional schools. The programmes delivered by these colleges were designed as a special form of tertiary education with a more practical character. Practical training represented around 40% of the programme and was supposed to be carried out within enterprises.

Post-secondary vocational education ended with a diploma exam. A student who has successfully passed the exam received a diploma with the name of the programme and the title of the vocational qualification. A post-secondary vocational diploma enabled students to start working in specific occupations.

Since the academic year 1998/99, vocational college graduates have gained the possibility to enrol in the second year of professional types of higher education programmes if the higher education institution providing this type of studies had made such an arrangement possible. In 2004 these programmes have been legally placed in the tertiary education sector.

3 Classification of education in Slovenia in an international perspective

Till most recently no national standard classification of education existed in Slovenia. Instead one may identify a variety of classifications used for different purposes; they reflect diverse developments in the Slovenian educational system as well as in the labour market. Especially with regards to the education-employment link, three types of classifications of qualifications may be identified: a classification of school education, a classification of professional education and a classification of occupational/professional competencies. Here first and second type of classification will be considered.

From the point of developments in the field of educational classifications in Slovenia it seems important to mention that in line with social goals assigned to “*career oriented education*”, a social agreement on a unified basis for classification of occupations and professional education was adopted in the 1980s covering the whole territory of the former Yugoslavia. In this way a link between formal education and jobs and occupations in the employment system was established. Professional education was defined as structured by general knowledge, professional/vocational knowledge and skills necessary to perform a particular work and tasks, and “successful self-management activities”. Individual stages of professional education were obtained from state approved education and training programmes. It was possible to finish the programme either in an organisation verified for its delivery or via autonomous education in an examination system. Professional education was classified in eight stages in line with individual categories of job complexity. The stages were defined as follows:

I. Stage	complete and not completed primary education and less than 6 months of training
II. Stage	complete and not completed primary education and 6 months of training
III. Stage	completed eight year primary education and 1 year of secondary vocational training
IV. Stage	2 to 3 years of secondary vocational training
V. Stage	4 to 5 years of general and technical secondary education (master exams and vocational-technical programmes included)
VI/1 Stage	short higher education (first degree of higher education; two-year higher professional education)
VI/2 Stage	specialisation after completed short higher professional education
VII/1 Stage	higher education
VII/2 Stage	specialisation after completed higher education and master degree
VIII Stage	doctoral degree

This classification was not accepted by the legal order of the new independent Slovenia.

Very much in line with the above scale, a Coding of vocations/professions² was prepared in 1984 by the National Employment Office. The education and training outcomes titled vocations/professions were sorted by the above coding scale. The scale encompassed eight categories, some of them divided into subcategories. Qualifications classified in this system were based on the duration of training required to gain a particular qualification. The coding scale thus represented a type of qualification hierarchy.

Changes in the national education system and the labour market brought about in the 1990s also affected the national terminology used in the two systems. Slovenia has followed the international terminology. The term 'occupation' has been introduced as a correlate of the labour market and the definition from the International Standard Classification of Occupations (ISCO-88) has been adopted. With regards to the education system, at the level of secondary education the term 'vocation' was replaced by the term 'title of vocational/technical education' while tertiary education retained the term 'professional/scientific title'.³ In line with these changes the 'coding of vocations' was renamed into the 'coding of vocational and professional education' (Republiški zavod za zaposlovanje, 1994) and some novelties were taken into account. Because of the demand for a quick and efficient coding of data on vocational/professional characteristics by the National Employment Office, all solutions regarding new educational titles have not followed the legally prescribed forms such as some new educational forms (see Republiški zavod za zaposlovanje, 1994).

The reformed system of vocational education and training is not delivering qualifications equivalent to stages I and II of the former system. The same goes for specialisations after short higher (two-year) professional education, classified into stage VI/2 of the former system (Table 1, third column). Moreover, higher professional education, university education, specialisation after university education and master degree are classified into the same category (stage VII) while the doctoral degree is classified separately (stage VIII).

This classification is used by the registers of the unemployed and vacancies, in the system of occupational descriptions, in the system of vocational guidance and information as well as in the system of study grants. It is argued that the coding is compatible with the National Standard Classification of Occupations and the two tools are used jointly in classifying two different characteristics of the labour force, the type of occupational tasks performed by a person, and the required education/qualification to successfully perform the tasks. They represent important in-

² Traditionally in Slovenia the outcomes of the education and training processes were defined in terms of vocations.

³ Professional and scientific titles obtained in higher education are regulated by the Act on Professional and Scientific Titles adopted by the Parliament.

struments for job matching in the labour market. They also provide information to the education system on training needs of the economy.

Another classification regularly used in classifying school education is based on education and training programmes and follows the valid education acts:

- Primary education (8 years/9 years after the 1996 reform)
- Lower secondary vocational training (one-and-a-half- to two-and-a-half-year training programmes)
- Secondary vocational training (three-year training programmes – dual and school type)
- Four- and five-year upper secondary education (technical and general)
- Short (two-year) tertiary programmes (two-year post-secondary vocational education)
- Three-year higher professional education
- University degree, masters degree, and specialisation after the university education
- Doctoral degree

Changes in the educational system caused by the educational reform in the 1990s, increasing demands for empirically supported decision-making by policy makers and, perhaps most importantly, the need for international/European comparability of the educational system and outcomes as well as effects of these outcomes have required a nationally standardised educational classification. In April 2006 the Slovenian Government adopted a new national standard classification system of education (KLASIUS) classifying educational activities and outcomes. The basic structure of the new national standard classification of education activities/outcomes is presented in the Annex.⁴

Also the new national standard classification system of educational activities and outcomes is composed of eight levels; some of them are divided in sublevels. Each level is defined by the complexity of educational content and represents a step from less towards more complex learning experiences and competencies. Each particular level represents a certain (national) standard of the content (knowledge, skills and competencies) which has to be gained in order to complete a particular learning/educational activity.

⁴ In addition to classifying formal educational activities and outcomes the new classification system also tries to account for some national qualifications/activities existing in Slovenia that are not equivalent to the school education and are found in the adult education system. Two types of qualifications/activities are considered: national vocational qualifications obtained in the certification system owned by the labour ministry (National vocational qualification Act 2000) and shorter (400 hours duration) publicly accredited training programmes not leading to a title of vocational/professional education (Vocational and Professional Education and Training Act 1996). The classification of these outcomes/activities is not included in the Annex.

The classification system was prepared under the coordination of the Statistical Office of Slovenia but in cooperation with all main stakeholders. It is claimed that the classification has built on domestic as well as international experiences. Concerning its alignment with international classifications it has taken into account the ISCED-97 fields of education, innovations in higher education introduced in the Bologna reform and the European Qualifications Framework.

3.1 Compatibility of the Slovenian national educational classifications with the ISCED-97

While joining the European Union it has become very important to have adequate standardised instruments which enable comparisons in the field of education and lifelong learning at the European level as well as among the member states. This has been stressed even more since the developments in vocational education and training and higher education indicate the tendency to ever greater convergence among countries. Moreover, common EU indicators for measuring the realisation of common goals in the fields of education and training and employment have been established. On the other hand it is in the interest of the country itself to maintain a certain degree of international compatibility of educational systems, programmes and outcomes in order to assure greater transparency of qualifications and thus make international mobility of students and the labour force easier. Authorised state institutions provided a grid enabling the translation of nationally approved education and training programmes and their outcomes into the ISCED-97 categories. Here a brief description is presented.

ISCED 0 (pre-primary education) classifies the preschool education from 3 years of age to child's enrolment in primary education (at 6 years of age since the introduction of 9 year primary education and at 7 years of age in case of 8 year primary education). However prior to the 1996 educational reform child care was part of social protection system. But a one year pre-primary education prior to the enrolment in primary education (so called "mala šola" – small school) was organised which was compulsory.

ISCED 1 (primary and first stage of basic education) encompasses the first part of basic education. However the length of this part varies depending on changes introduced in the education system in different time periods. In the period between the world wars and until 1946, compulsory schooling lasted 8 years or at least 6 years. A law from 1929 enacted a one- to four-year elementary school (*1-4-letna osnovna šola*) and a five- to eight-year high national school (*5-8-letna višja ljudska šola*). It was possible to transfer from four-year elementary school to high national school, to middle-class school (*meščanska šola*), and to first class of lower gymnasium (*nižja gimnazija*). All three types are defined as lower secondary schools. In 1946, seven-year compulsory schooling was enacted. It was again divided into two

stages: four years of basic school (*osnovna šola*) and three years of higher basic school (*višja osnovna šola*). In 1950, eight-year compulsory schooling was reintroduced with the second four years transformed into lower gymnasium. Eight-year comprehensive primary schooling had been characteristic for Slovenia from 1958 to 1996 when nine-year primary schooling was enacted. In contrast to former systems the new one is divided into three cycles, each consisting of three years (see Ostanek, 1999: 70–72). ISCED level 1 includes the first four years of all former types of primary education and the first two cycles (i.e. 6 years) of the most recent nine-year primary education.⁵

ISCED 2 (second stage of basic education) classifies the completed second cycle of primary education of all former systems irrespective of whether they were called higher national school, lower gymnasium or middle-class school, and the third triad of the current nine-year primary schooling.⁶ As we are talking about comprehensive primary education, successfully completed basic education gives access to ISCED 3A and is thus classified into ISCED 2 A.

Finished compulsory schooling with successfully completed at least 6 grades of primary education enables access to ISCED 3C and could be grouped into ISCED 1.⁷

ISCED 3 (upper secondary level) encompasses education and training after completed compulsory education. In comparison to the comprehensive basic education, secondary level is more diversified. Prior to 1981 secondary education was conceptualised so as to lead to academic studies (so called classic grammar schools), to higher professional schools and to employment (secondary professional and technical education), and solely to employment (apprenticeship, industrial schools for skilled workers and highly skilled workers). The first option is classified as ISCED 3A, the second one as ISCED 3B and the third one as ISCED 3C. It was already mentioned that the 1981 educational reform abolished tracking at the level of upper secondary education. At that time, educational outcomes at the upper secondary level provided a double qualification giving access to the labour market *and* to tertiary programmes. As a consequence, secondary education obtained in that system could be classified as ISCED 3B. However there were three stages of secondary education and training relating to different levels of complexity of work in the employment system:

⁵ Fulfilling the basic educational legal requirement means staying in primary schooling from the age of 7 to 15 in the former systems and from the age of 6 to 15 in the new system.

⁶ At least seven years between 1946 and 1950; at least nine years since 1996; and at least eight years in all other time periods.

⁷ Here attention has to be called to the fact that this category has access only to lower secondary vocational training programmes which last for two and a half years but not three-year secondary VET programmes that are also classified into ISCED 3C.

- shortened education and training meant for semi-skilled work (stages I and II);
- secondary education and training meant for skilled work in trade and industry lasting 2 to 5 years (stages III, IV, V);
- continuing secondary education for highly skilled work (craftsman; foreman) (see *Usmerjeno izobraževanje*, 1983: 93).

Theoretically second and third type of secondary education and training should lead to tertiary education, but in practice this applied to stage V of the second type and third type of secondary education. Hence, first type and stages III and IV of the second type are properly classified as ISCED 3C, stage V of the second type in ISCED 3B and continuing secondary education for highly skilled workers as ISCED 3B or ISCED 4B/C. Since general secondary programmes were abolished no type of secondary education obtained from the education system operating from 1981 to 1996 could be classified into ISCED 3A.

The 1996 reform of VET has reintroduced the vocational and general/academic streams. two- to three-year secondary VET represents the vocational stream leading to employment and is therefore classified into ISCED 3C. Four- and five-year technical education represents ISCED 3B, and general education (general and professional gymnasiums) and maturity course are classified into ISCED 3A as they lead directly to academic studies.

ISCED 4 (post-secondary non-tertiary education); looking at the educational outcomes one might argue that in Slovenia there is no education and training that could be classified as ISCED 4. Usually continuing secondary education programmes such as vocational course, master craftsman examination and two-year vocational-technical programmes are classified into ISCED 4B as they clearly require completed secondary vocational/technical education as a prerequisite for enrolment. Programmes delivered by post-secondary vocational colleges seem to be properly classified as ISCED 4B but as they are part of tertiary education, they are classified as ISCED 5B. In practice ISCED 4 is often skipped or collapsed with ISCED 3 (ISCED level 3–4).

Like ISCED 3, **ISCED 5** (first and second stage of tertiary education) contains a variety of study programmes and outcomes connected to diverse labour market outcomes and diverse opportunities for further education. It starts with shorter (two-year) tertiary professional education and shorter university education (first degree diploma) characteristic of the period prior to 1991, includes three-year higher professional education introduced in the beginning of the 1990s, four- and five-year university education, one- to two-year specialisation degree following higher professional and university education as well as two-year master of science/arts degree. Except for the university education enabling direct access to former M.S. and M.A. programmes and to ISCED 6 (doctoral programmes) which are classified into ISCED 5A, all other tertiary programmes are classified into ISCED 5B.

Finally, the doctoral degree is classified as **ISCED 6**.

Table 1. Educational classifications (currently) used at the national level and ISCED-97

Stages of education ^a	National standard classification of education ^b	Stages of vocational and professional education ^c	ISCED-97
Preschool education	010 Pre-first level		0
Primary education, lower level	011 First level		1
Primary education, higher level	012 Second level	I	2 A
two-year vocational education	013 Third level	III	3C
three-year vocational education	014 Forth level	IV	3C
four-year secondary education (general & technical)	015 Fifth level	V	3A, B
two-year higher vocational education	016 Sixth level; 0161 sublevel 6/1	VI	5B
three- to four-year higher (non-university) professional education	016 Sixth level 0162 sublevel 6/2	VII/1	5B
University education	017 Seventh level	VII/1	5A
Specialisation	Eighth level 181 sublevel 8/1	VII/2	5B
Masters degree	18 Eighth level 181 sublevel 8/1	VII/2	5A
Doctoral degree	18 Eighth level 182 sublevel 8/2	VIII	6

Notes:

^a Levels and stages of education defined by respective laws.

^b National standard classification of education (KLASIUS) adopted by the Government on 26 April 2006.

^c Stages of vocational and professional education as defined by the Coding of Vocational and Professional Education (National Employment Office, 1994).

However, given that the ISCED-97 has its basis in educational systems considerably different from the Slovenian educational system, such translation is not without problems. These problems are most pronounced with classifying vocational/professional education obtained from the reformed secondary vocational education and training and higher professional education. The national tradition of classification of education in terms of an educational hierarchy somewhat contradicts the classification logic of the ISCED-97. The first difference between the two classifications is caused by different vertical differentiation of educational systems which is not adequately reflected in ISCED 4 as already mentioned above. Programmes in the Slovenian education system classified in ISCED 4 deliver educational outcomes equivalent to those delivered by four-year secondary technical education although they upgrade/extend some secondary education programmes. It might thus be

claimed that the existing translation of the Slovenian secondary education into ISCED 3 and 4 may lead to some misinterpretations of its main characteristics particularly with regards to different opportunities in accessing tertiary education and, consequently, different outcomes in the labour market. However looking from the point of the development of one's educational career these programmes clearly mean an upgrading of already completed secondary education and training.

Again, from the point of view of the national tradition, one could as well pose a question of the meaning of the horizontal groupings A, B and C. They are not supposed to designate any vertical structure. However considering opportunities provided by the educational qualifications classified into each of these groupings to access tertiary education and different positions in the labour market, this does not seem to hold true in the Slovenian case. The Slovenian educational scales do not separately designate education obtained in the vocational track and education obtained in general/academic track in the way characteristic of the ISCED-97. However it is important to distinguish between shorter vocational programmes and longer technical and general programmes. Without such differentiation within ISCED 3 there would be completely wrong picture about the quality of secondary education in Slovenia (see Table A1).

The second difference is related to the classification of higher education. The ISCED-97 has left only two levels for the classification of tertiary education – ISCED 5 and ISCED 6. It may be claimed that ISCED 5 is blurring the diversity of the Slovenian tertiary education. Contrary to the classification of upper secondary education, where equivalent outcomes are classified on different levels (ISCED 3 and 4), here the outcomes with large hierarchical distance (and more years of schooling) are found on the same level.⁸ Therefore ISCED 5B and 5A need to be better distinguished, as well as short and long qualifications within 5A.

However, there is still time for Slovenia to consider some of these discrepancies while developing the criteria for harmonisation of the ISCED-97 and the National standard classification of education (KLASIUS).

Regarding these issues it may be concluded that the international standard classification of education ISCED-97 may be a rather robust tool for the international comparability of education obtained from different national education systems as well as the outcomes in the labour market that are closely related to the individual educational attainment.

⁸ For instance, those completing three-year higher (non-university) professional education as well as those with specialisation/master degree after finished university education are classified as ISCED 5.

3.2 Educational attainment in Slovenia: Comparison of the national data and the EU-LFS

In Slovenia Labour Force Survey data are currently the most comprehensive dataset providing data on educational attainment of the Slovenian population, and are updated on a regular basis (quarterly). The educational structure of the population for the year 2004 from the European Labour Force Survey and national Labour Force Survey according to the ISCED levels and to the national educational scale are shown in Table 2.

Table 2. Educational outcomes of the Slovenian population of age 25–64, 2004 (in per cent)

National educational scale	ISCED-97 scale	EU-LFS, Q4	Slovenian LFS	
			National scale	ISCED scale
No school education	0	0.46	0.44	
Incomplete primary education (1–3 years)	0–1 incomplete basic education	0.00	0.44	
Incomplete primary education (4–7 years)	1–2 incomplete basic education	2.25	2.65	2.65
Completed primary education	2A: basic education	17.36	17.35	17.35
Lower (two-year) secondary VET	3C: Upper secondary education		28.67	28.67
three-year secondary VET				
Secondary technical education	3–4B: Upper secondary education	63.49	27.70	27.70
Vocational-technical education				
Master craftsman exam				
Vocational course	3–4A: Upper secondary education		4.25	4.25
Secondary general education				
Maturity course				
Shorter higher professional education, I. degree higher education, specialisation after higher shorter professional education	5B: vocational/lower professional tertiary education	7.83	6.37	9.20
Higher professional education				2.83
Higher university education	5A: academic/higher professional tertiary education	7.53	8.58	8.58
Postgraduate specialisation, Master's degree	6 second stage of tertiary education	1.08	1.15	1.15
doctoral degree				
Total		100.00	100.00	100.00

While comparing the data obtained from both surveys, some discrepancies may be observed. The most visible ones are those at ISCED levels 3 and 4 and 5A and 5B. In

comparison to the EU data, the data from the national dataset show a lower percentages of ISCED levels 3 and 4 and higher percentages of ISCED level 5. At this level of the analysis it is difficult to find an explanation of these discrepancies. It is most likely that some qualifications within these categories were classified differently. However there might be also some other methodological explanations, e.g. sampling variation.

There is another, probably more important issue resulting in above problems concerning the coding of educational attainment of the population based on the Labour Force Survey either by a national coding system or by ISCED-97 levels, namely the educational scale used in the data collection form (original response categories). From 2000 onward, the form contains rather detailed national categories for primary, secondary and tertiary undergraduate education, while education and training programmes which should be classified as postsecondary are not recorded separately. In the national scheme, the classification of vocational courses, master craft examinations and vocational-technical education after completed three-year vocational training follows the equivalence of educational outcomes (certificates/diplomas); they are therefore collapsed into the category of secondary technical education in the national classification. Therefore, in the EU-LFS, all upper secondary and postsecondary non-tertiary education is summed up into one category (ISCEDC 3–4; see also Table A1) which prevents any analysis of variation between different types of programmes at the level of secondary and post-secondary education. As their outcomes provide qualification for the labour market as well as qualification for access to tertiary education they seem to be properly coded as ISCED 3B. However, access to these programmes is conditioned by completed three-year secondary vocational training which would justify their separate classification as postsecondary programmes (ISCED 4). As upper secondary education is very common in Slovenia, the collapsing of many different qualifications into one category might be very consequential in statistical analyses.

As for the tertiary postgraduate level specialisation, master degree and doctoral degree are collapsed into the same category in the national scale, despite the fact that doctoral degrees should form a separate category. Therefore Master's and doctoral degrees cannot be distinguished in the ISCED-97. As for ISCED 5A and 6, for the time being the solution may be made in line with actual aims and goals of the research. However collapsing 5A (second/long degrees) and 6, while distinguishing 5B and 5A (first/short degrees) seems to be the most suitable one.

Hence, EULSF data for Slovenia currently cannot be coded into the full ISCED-97, but only into a simplified version where ISCED 3 and ISCED 4 are collapsed into one category (but within this ISCED level 3/4 category, A, B and C could be distinguished, which would already be a considerable improvement), and where postgraduate qualifications form the highest category instead of PhDs only.

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Annex

Composition of the new national standard classification of stages of education (KLASIUS, April 2006)

10 Preschool education

11 First level: lower stage of primary education/not completed primary education

- 11001 lower level primary education/incomplete lower stage primary education
- 11002 lower level primary education/complete lower stage primary education
- 11003 completed compulsory schooling/incomplete higher stage primary education
- 11999 lower grade primary education/incomplete primary education

12 Second level: Higher level primary education/primary education

13 Third level: Lower vocational education and similar/lower vocational education and similar

14 Fourth level: Secondary vocational and similar education/secondary vocational and similar education

15 Fifth level: Secondary technical and other professional and general education/Secondary professional and general education

- 150 Secondary technical and other professional and general education/secondary professional and general education
- 15001 Secondary technical and other professional education/secondary professional education
- 15002 Secondary general education/secondary general education
- 15999 Else – not classified elsewhere

16 Sixth level: First stage of higher education and similar/first degree of higher education and similar

- 161 Sublevel 6/1: College and vocational college education/college vocational and similar education
 - 16101 College vocational education/College vocational education
 - 16102 College education (former)/College education (former)
 - 16199 College, college vocational and similar education/College, college vocational and similar education, not classified elsewhere
- 162 Sublevel 6/2: First stage of higher education, higher professional education specialisation (former) and similar/first degree of higher education, higher professional education (former) and similar
 - 16201 specialist education after completed short higher education (former)/specialist degree after completed short higher education
 - 16202 Higher professional education (former)/higher professional degree (former)
 - 16203 Higher professional education (Bologna first stage)/higher professional degree (Bologna first cycle)
 - 16204 University education (Bologna first stage)/University degree (Bologna first stage)
 - 16299 Similar education not classified elsewhere

17 Seventh level: Second stage of higher education and similar education/second degree higher education and similar

- 170 Second stage higher education and similar/second degree higher education degree and similar
 - 17001 Specialisation after completed higher professional education (former)/specialist degree after completed higher professional education (former)
 - 17002 University education (former)/university degree (former)
 - 17003 Master programmes (Bologna second stage)/master degree (Bologna second stage)
 - 17999 Second grade higher education and similar/second degree higher education and similar not classified elsewhere

18 Eighth level: Third stage higher education and similar/third degree of higher education and similar

- 181 Sublevel 8/1: master programmes (former) and similar/master of science and similar
 - 18101 Specialisation after university education (former)/specialist degree after university education (former)
 - 18102 Master programmes (former)/master of science (former)
 - 18199 Master programmes (former) and similar/master of science (former) and other similar degrees not classified elsewhere
- 182 Sublevel 8/2: Doctoral and similar education/doctoral degree and similar
 - 18201 Doctoral education (former)/doctoral degree (former)
 - 18202 Doctoral education (Bologna third stage)/doctoral degree (Bologna third stage)
 - 18299 Doctoral and similar education/doctoral and similar scientific degree not classified elsewhere

19 Ninth level: Basic stage education/education not classified elsewhere

Table A1. Educational attainment in Slovenia: Comparison of the national data and the EU-LFS

2000 (Q2)	National LFS	EU-LFS	
ISCED 0	0.00	0.00	ISCED 0
ISCED 1	0.00	0.00	ISCED 1
ISCED 0–1	0.30	4.04	ISCED 0–1
ISCED 2	19.64	20.19	ISCED 2
ISCED 3–4C	29.33		
ISCED 3–4B	27.51	61.99	ISCED 3–4
ISCED 3–4A	5.96		
ISCED 5B	9.83	8.07	ISCED 5B
ISCED 5A	6.38	4.85	ISCED 5A
ISCED 6	1.05	0.86	ISCED 6
TOTAL (%)	100.00	100.00	TOTAL (%)
TOTAL (N)	894000	12,374	TOTAL (N)

2001 (Q2)	National LFS	EU-LFS	
ISCED 0	0.00	0.00	ISCED 0
ISCED 1	0.00	3.70	ISCED 1
ISCED 0–1	0.17	0.00	ISCED 0–1
ISCED 2	20.05	20.31	ISCED 2
ISCED 3–4C	29.57		
ISCED 3–4B	28.45	63.77	ISCED 3–4
ISCED 3–4A	4.55		
ISCED 5B	9.46	6.23	ISCED 5B
ISCED 5A	6.69	5.15	ISCED 5A
ISCED 6	1.07	0.83	ISCED 6
TOTAL (%)	100.00	100.00	TOTAL (%)
TOTAL (N)	914000	12,755	TOTAL (N)

2002 (Q2)	National LFS	EU-LFS	
ISCED 0	0.00	0.00	ISCED 0
ISCED 1	0.00	2.94	ISCED 1
ISCED 0–1	0.15	0.00	ISCED 0–1
ISCED 2	18.71	19.09	ISCED 2
ISCED 3–4C	29.55		
ISCED 3–4B	29.36	65.24	ISCED 3–4
ISCED 3–4A	4.55		
ISCED 5B	8.83	5.77	ISCED 5B
ISCED 5A	7.93	6.22	ISCED 5A
ISCED 6	0.90	0.74	ISCED 6
TOTAL (%)	100.00	100.00	TOTAL (%)
TOTAL (N)	922000	12,984	TOTAL (N)

Table A1. Educational attainment in Slovenia: Comparison of the national data and the EU-LFS (continued)

2003 (Q2)	National LFS	EU-LFS	
ISCED 0	0.00	0.31	ISCED 0
ISCED 1	0.00	2.59	ISCED 1
ISCED 0–1	0.00	0.00	ISCED 0–1
ISCED 2	16.87	17.48	ISCED 2
ISCED 3–4C	29.50		
ISCED 3–4B	29.50	63.93	ISCED 3–4
ISCED 3–4A	4.81		
ISCED 5B	9.25	7.81	ISCED 5B
ISCED 5A	8.91	6.90	ISCED 5A
ISCED 6	1.26	0.99	ISCED 6
TOTAL (%)	100.00	100.00	TOTAL (%)
TOTAL (N)	896000	13,379	TOTAL (N)

2004 (Q2)	National LFS	EU-LFS	
ISCED 0	0.00	0.38	ISCED 0
ISCED 1	0.00	2.38	ISCED 1
ISCED 0–1	0.13	0.00	ISCED 0–1
ISCED 2	16.76	17.69	ISCED 2
ISCED 3–4C	28.41		
ISCED 3–4B	29.65	63.19	ISCED 3–4
ISCED 3–4A	4.83		
ISCED 5B	9.90	8.43	ISCED 5B
ISCED 5A	9.03	6.95	ISCED 5A
ISCED 6	1.28	0.98	ISCED 6
TOTAL (%)	100.00	100.00	TOTAL (%)
TOTAL (N)	946000	12,582	TOTAL (N)