

Conceptual Framework for the Comparative Study of VET Systems in Europe¹

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1. Introduction

1.1 Context of our study

Over the last few years research into the development of vocational education and training (VET) systems in both Europe and the world at large has addressed two main objectives: *first*, contributing to competitiveness and economic growth by providing specific and generic competencies and, *second*, promoting social inclusiveness. These two objectives are becoming increasingly interrelated.

While the transition and complementarities between education and the labour market in the area of higher education have already been widely studied by several European projects² and HE tracer studies supported by research and university centres, relatively little has been done in the area of VET. In light of the need to properly understand the VET population's short- and long-term career perspectives³ it is important to study the characteristics of VET students during their educational process.

Hard evidence regarding the differences and similarities of VET students' career aspirations, school success in relation to acquired competencies and their socio-biographic characteristics is indispensable for adjusting VET curricula to employers and individuals. This is a tough task. The current strategic VET programme developments are being stretched in polarities between their social function versus preparation for work or, in other words, diversification for particular employers' needs *versus* an orientation towards a general post secondary education and lifelong learning.

Most questions relating to a comparative analysis of the progress of the VET system dimension are located within the broader policy and research debates on education in general. A good overview of these key questions was from the perspective of employability offered by Teichler (2009) at the DECOWE event⁴ that has framed the guidelines for over 130 contributions of European researchers. The questions that were identified were as follows:

a) *To what extent should educational systems make people ready for work? What is the relative weight of different kinds of competencies for the successful employment and work of VET students?*

¹ This is a draft version. Paper has been prepared as a part of LLP_7EU VET project. See <http://www.7eu-vet.org/>.

² Such as CHEERS (EC), REFLEX (EC), HEGESCO (EC), AHELO (OECD) or

³ One currently most prominent project in this area is the OECD's PIAAC project.

⁴ Acronym for emerging Network Development of Competencies in Education and World of Work. See <http://www.decowe.org>

- b) How much do job requirements as well as patterns of competencies vary according to occupations, economic sectors and countries? Do we note the stability of traditional patterns, convergent trends or other dynamics?*
- c) How do job requirements, competencies as well as links between competencies with employment and work differ according to educational levels?*
- d) What is the actual role of educational institutions in fostering vocationally relevant competencies – as compared to socio-biographic background, “credentialism” and reputational ascriptions, initial training and learning after starting a job start as well as continuing professional training and learning?*
- e) To what extent does and should educational institutions “respond” to presumed job requirements or be proactive actors of innovation and new configurations of competencies?*
- f) How important is feedback from pupils for the development of teachers (trainees)?*

Even though these questions were designed for different educational structures on the secondary and tertiary levels, in the last few years they have been becoming increasingly relevant for VET. Compared to general and higher education, with their sectoral orientation VET schools have much more clearly established links with the world of work. As a result, the skill match of VET students more directly affects training costs for individuals, companies and society at large.

The second reason highlighting the need to strengthen research into VET students’ careers, or in general terms to at least make it broadly comparable to the development of tracer studies in higher education, is the persisting magnitude of profiles in the labour market that gravitate towards VET-related occupational structures. Following CEDEFOP (2010) the share of university trained people is still expected to rise, those who are trained to a medium level (ISCED 3 and 4) will dominate the largest employment sector in Europe. Due to the varieties of VET systems at the European level, changes to the financing VET system are expected to be even more complex than in higher education. The incentives for this are related to complementarities between formal qualifications and acquired skills, occupational regulations, employment protection, training focus and the implementation of dual and apprentice systems.

In short, the expected future prosperity of VET system developments depends increasingly on the supply of proper skills and returns on qualifications. These improvements can be achieved by establishing the system that better awards qualifications on the basis of acquired competencies, as expected in the professional community and society.

1.2 Policy developments related to VET

The economic downturn and growing flexibilisation of the economy is strongly triggering changes in education. Qualification processes are also influenced by demographic pressures, including migration and the problem of the social inclusiveness of the deprived population which increasingly includes young people. In this context, European policy developments in the area of VET in Europe⁵ address several distinctive, yet related categories. The four main categories are as follows:

⁵ As summarised in CEDEFOP 2009 (p.21), The Helsinki communiqué set four priorities as from 2007:

Curricular developments. Modernisation of the VET system is understood in many countries as programme modularisation and implementation of the learning outcome approach. However, in many cases this is accompanied by the question of whether systems are based on the proper number of programmes. In the event there are too many programmes for too few pupils, on what basis can the programmes be integrated? A particularly sensitive is the question of VET's fusion with general education. To some extent this is also related to system permeability between VET schools and HE.

Stakeholders' positioning and functions. There is a lot of discussion in the EU about how VET can raise its status and reputation. This is linked to the question of the falling enrolments in VET institutions. This problem targets all groups of VET stakeholders such as employers, social partners, deprived groups, immigrants and adults, and seeks answers to how the system can better match their needs.

Implementation of policy tools. The key EU tools currently on the agenda in the EU are the European qualification framework (EQF), the European credit system for VET (ECVET), the European quality assurance framework for VET (EQAVET), and Europass. They aim to support the quality⁶ and attractiveness of VET.

Other issues involve problems and challenges arising in interrelated areas. Examples encompass credentialism and social protection, over-qualification, vertical and horizontal mismatches, along with various aspects of employability⁷.

Phenomena related to these issues are already being studied by different employability measures such as the participation of marginal groups, educational level attainment or drop outs. In addition, over the last few years several researchers have been conducting studies on skill anticipation and striving to understand the relations between key competencies. Yet, the sustainability of indicators is difficult since they occur in the context of flexibilisation and the types of constant uncertainties that have emerged. Bédoué et al. (2009: 35-40), for example, present a wide overview that contextualises the current system development of VET. Examples include: a) shorter timeframes for choices and actions in the labour market, organisations and presumably also for educational institutions; b) the decreasing durability of legislative practices regulating employment and training; c) the complexity of qualification development and the uncertainty of defining job profiles; and d) the increasing deviations between job-education match⁸. These changes imply a need to shift from narrow towards broader qualifications and require accreditations of different forms of learning.

The trend of broadening vocational qualifications is not isolated from other unresolved questions. CEDEFOP (2010a), for example, reports that the system should encourage: a) a *gradualist* approach via an individual time perspective; b) follow the principles of transparency, stability and predictability in a way that supports its signalling power; and c) improve the development of qualification bodies

(a) policy focused on improving the attractiveness and quality of VET; (b) development of common instruments and tools to enhance a European area of VET and a European labour market; (c) strengthening learning from others; (d) taking all stakeholders on board. Priority 1 refers to policy focused on improving the attractiveness and quality of VET (European Commission, 2006, p. 5) what includes links between VET and working life, better counselling and information in preparation for working life, permeable between VET systems and other structures of education, excellence in skills development.

⁶ See for example Parsons et al., 2009: 90-94 for an overview of qualification requirements (entry, and post-qualification work experience, continuous professional development)

⁷ However, the aspect of employability versus employment certainly deserves its trial – this is particularly the case in VET that by its definition follows this goal.

⁸ The list is not exhaustive.

(source). Areas for the development of indicators would thereby comprehend the following orientation points (Bouder & Kirsch, 2009: 133-135): (a) a social partnership model as the norm for VET policies and decisions; (b) a key focus of VET systems is to equip learners with competencies; (c) VET sub-segments closely follow sectoral developments in the region; (d) teachers and trainers have expertise in the VET domain and education; and (e) systems are inclusive of ICT and innovation.

Labour market flexibilisation and the related uncertainties are not the only factors that make policy development difficult. A more problematic issue is the economic downturn. CEDEFOP (2010: 9), for example, estimates that the European labour market currently “offers 10 million jobs less as prior to economic crisis, and even though few million of new jobs will be created employment by 2020 will stay below the peak of 2008”.

1.3 Goals and Limitations

Goals

The initial scientific and research goals of our study relate to the development of competencies, learning attitudes, VET students’ perceptions of their programmes, along with future employment and career possibilities. ICT tools and systems of advising are emphasised. In this way the study’s overarching goal is to explore in a country-comparative fashion the determinants of VET students’ school success relative to the acquired competencies, the fulfilment of their career aspirations and vocational satisfaction within the learning process. A reflection on these empirical findings is placed in the context of national and EU VET policies.

This paper has six sections. In the second section we first present key research issues and concepts related to VET developments. In the third section we provide a short overview of the conceptual frameworks and construct a version of our own. The fourth section describes the methodological background of a large-scale survey in seven EU countries. On the basis of all the previous sections we present the preliminary empirical results of our study for Slovenia. In the concluding sections we outline the key conclusions and provide recommendations for further research.

Limitations

Finally, we point out the limitations of this paper that for various reasons does not already include certain topics that are highly relevant to strategic VET development.

Geographical mobility and *ethnicity* represent an increasingly big issue in EU policy development (Ward, 2009). They relate to reasons for studying (e.g. work, education) and consequences (e.g. transaction costs, social factors) of moving regionally within the EU and among EU and other countries. A particular point of interest regarding general labour market developments in Europe relates to the deficit and soliciting of skilled workers in relation to certain sectors and occupational regulations.

However, also on the level of the VET process this area poses several research challenges. Some of them are discrimination, ethnic and racial stereotypes, religious and cultural differences, ethnic

identity formation, assimilation processes and identity development (Graham & Hudley, 2007: 392). A different but strongly related issue addresses the developmental aspects of cultural competencies (Chiu & Hong, 2007: 489). It is important to add that the scale of processes involving the mobility of VET students prompted by mobility schemes (e.g. the Leonardo da Vinci mobility project, or regional processes) is much smaller than the mobility of Erasmus students in higher education⁹. Accordingly, the whole focus of this study is oriented much more to VET students' families.

In this study *skill matching* takes a different approach from the one used in school-to-work transition surveys. While the so-called "matching" issue refers to compatibility between the individual, education and professional destination, the model presented later in this paper is oriented to the complementarities between school success and acquired competencies with special attention to a self-assessment of how much VET students are prepared for autonomous work. However, further speculations could also be made on the basis of the complementarities between the field of VET and VET students' future career aspirations¹⁰.

Due to the composition of the consortium, *information and communication technologies* (ICT) represent a special focus of the research and are addressed separately in a subsequent paper.

⁹ 7EU VET project still provides empirical evidence related to this issues.

¹⁰ But this will be described in the next report.

2. Research issues and concepts related to VET developments

2.1 An introductory overview of theoretical frames

Several scientific disciplines and theories address the question to what extent education institutions contribute to career development of skills and social development. On general level economists, including early human capital theorist (Schultz, 1961; Becker, 1962) proving that the education systems impact higher salaries and domestic production. Other critical approaches (Thurow, 1975; Spence, 1974) claim that more important effect of educational systems dwells in social reproduction and inclusiveness control.

However, when considering a broad overview of developments in VET, the list of disciplines and theories that can contribute to designing conceptual and interpretative frame is much broader. It includes: (a) studies on pedagogy, that in particular focus to VET teachers and learning modes of VET students; (b) sociological perspectives studying an overall role of education, labour market dynamics, gender and migration issues; (c) psychological perspectives with studies on individual learning, decision making processes and motivation that bring particular important contributions to surveying careers and determinants of professional success and to development of guidance and counselling domain; and (d) in the last year strong interdisciplinary approaches emerged focusing to competency modelling and work process analyses.

In this section we aim to provide an overview of key concepts from theoretical perspectives that are relevant for our study. Key sections are:

- a) Socio-biographic characteristics of VET students;
- b) Transition to VET, Career Aspirations & Vocational Identification;
- c) Learning, teaching and characteristics of VET programs;
- d) School success, acquired competencies, ICT and school satisfaction;
- e) The context dimension: comparative on international research of VET systems.

Concepts discussed in this section will be in the third section of this paper integrated into theoretical models for empirical part.

2.2 Socio-biographic characteristics of VET students

Surveying socio-biographic characteristic of VET population in broad terms relates to gender, age, habits and values of VET population. These characteristics are related to so called *neighbourhood determinants* (Duncan, 1994; Kauppinen, 2008; Gunz & Peiperl, 2007) starting with parents education, occupation, other employability determinants and income material and residential status, but also household density and tenure. These issues importantly impact behavioural and social

aspects of VET students, placing concepts such as 'the family stress model', 'parental investments' or 'environmental toxins', highly on the research agenda (Brooks-Gunn et al., 2007: 414).

These issues are on more general level widely framed by studies of *social stratification* (differentiation of social groups by material, occupational and educational status) and *social mobility* (processes that dermine social shifts within and among generations) studies and thus offers great contribution to understanding social inclusiveness and functions of VET systems and their status.

A special focal point in this area is related to *social cohesion and inclusion*. This is in our case somewhat different from those EU policy approaches that study labour market employability characteristics, poverty, drop outs or crime as we focus in our study to school population. However, our study does directly touch upon some of reasons for leaving school, dysfunctional behaviour (e.g. aggression, free time patterns, etc), social and cultural networks and material status.¹¹

Socio-biographic characteristic will in our study present key reference points for studying other concepts.

2.3 Career Perspectives and Occupational choice

Selected Perspectives and Studying Careers

In this section we focus attention to those approaches to career and vocational choice theories that offer highest potential for our study on 17-18 years old VET students. The term "career" is often defined as a sequence of positions and roles the individual occupies during their lifespan (Super, 1957). Key issues in domain are (Gunz and Peiperl; 2007: 55-56):

- (a) the link between personality and career success¹² based on the so called big 5 model¹³,
- (b) complementary and supplementary approaches to occupational choice between individuals own perspectives and environment, including decision making process,
- (c) career counselling development,
- (d) relation between subjective and objective career success¹⁴ and
- (e) its intersection with social marginalisation.

These issues are addressed by four key approaches: a) Holland's (1973) person-environment typology fit approach, b) various economic perspectives, c) developmental career theories and d) studies on decision making processes. In this short overview we limit focus only to approaches relevant for our study¹⁵.

¹¹ It is important to stress that at the same time parallel EU project is run by IT consortium, focusing directly to eight categories of deprived group out of which several are identifiable also in our study.

¹² The basic observation of careers distinguishes between objective and subjective career dimensions (Gunz & Peiperl, 2007). Yet it can be argued that the issue between objective and subjective dimensions is in fact methodological: individuals' success can always be viewed as subjective, while objective success has more to do with the issue of aggregation and comparison. Whatever position towards the objectivity of careers one takes, following Mayrhofer et al. (2007) professional success is always relational, referring to person-related aspects of a career, his or her social origin, work and societal and cultural dimensions.

¹³ (emotional stability, extroversion, openness to experience, agreeableness, and conscientiousness)

¹⁴ For individuals, the meaning of careers and success differ as progress between life stages and contexts.

¹⁵ Further elaboration follows in the final version of the study.

Paradigm of *traits and environment* is conceptualised on idea of fitting the right candidates to proper vocational paths, and has been designed already in early 20th century by Parson (1907). Author stressed the fact that in order to make a proper vocational choice one needs to a) have knowledge of own self, capabilities and interests, (...), b) requirements and conditions of success in work and education related to certain vocational domain and c) there should be established link between both. At that time this approach was contradictory to Taylor's views (1911) that focused only on improving workers efficiency.

Person-environment approaches have been further developed by Holland's (1973) career theory on vocational personalities. This theory establishes the link between personal fit and vocational types: realistic, investigative, artistic, social, enterprising, and conventional. On this basis of source (81), elaborates further theoretical and practical developments, namely, *personal approach* (person and environment provide what other want) and *supplementary* (resemblances between individual and environment), what can be to different extent interrelated.

Another relevant approach to studying career in the context of professional expertise development has been developed by Dreyfus and Dreyfus (1986). Authors presented a multi-stage model in which the individual progresses through different stages from novice to expert. Markowitsch *et al.* (2008) elaborated the model in relation to areas of professional application, work processes and relations of the individual towards work tasks. While the underlying question in this model refers to the centrality of tasks in a particular domain and, more importantly, to the issue of whether specific competencies can be developed in the context of generic ones, it is, however, important to stress that our population is in earlier stages of their career. The time they need to master school knowledge into occupational expert varies significantly between domains.

There are many models that address career stages and the link among them. Super (1975), for example, explains how first exploration stage (birth to adolescence; 0-16) relates to personality formulation, and development of capacities, interests and attitudes and broad, second stage (exploratory stage, 15-24) is important for development of professional interest, early work experiences and hobbies and third 'establishment' stage (25-44) implementation of professional expertise and stabilization¹⁶. Crocitto & Sullivan's (2007: 283) overview is much broader. It integrates further 4 core theories of career development, 2 theories of moral development and in addition the context of understanding of career development¹⁷.

While each of these models introduces distinctive approaches and number of career development stages all come to an agreement that age cohort of 16-17 is still in exploratory phase. However, there is a large difference between VET and general population. While the population in general education has in most cases still time to decide what vocational and career path to follow, VET population is to some extent determined, at least by broad professional field - despite increasingly various possibilities in continuous professional development¹⁸. In simple words it can be said that vocational choice process of VET population is in comparison to VET population more predetermined by environment – and in most countries take place in previous educational stages.

¹⁶ Other stages that follow are 'maintenance' stage (45-64) adjustments and improvement and the last stage as retirement and decline.

¹⁷ Each of these contributions provides an important frame for understanding of career aspiration of surveyed population. And will be presented in somewhat broader detail in the final report related to our study.

¹⁸ See section following sections for debates on skill and education match.

Lastly, it is important to mention that early stage of vocational identity formation starts already in the family¹⁹ and on this basis continues on the secondary level of vocational education, or post secondary educational levels. At these stage students begins with early socialisation and indoctrination into occupation, what is related to developing vocationally related values, norms and behavioural patterns of the future working environment. These 'vocational' identities are to various extents in relation with the future occupational identity. For this reason it is important to be aware that early socialisation into occupation in the family and school builds foundation of work motivation, good results and work commitment (Marhuenda, 2001).

Decision making process and factors of occupational choice

While approaches in the previous section focus to congruency between person, environment, and career developmental stages, other approaches stress occupational choice and stages of decision making processes. Known conception comprehends four phases: orientation, exploration, implementation to stabilization (Savickas, 2007: 89). These stages can be observed either within various positions of individual career or throughout ones whole career. In our case context of career decisions will be limited to studied population and their particularities related to puberty and biological changes, cognitive changes (development of abstract thinking), changes in social relations, and gradual transition towards labour market (Wagner & Wigfield, 2007: 222)²⁰. In the processes described above the role of parents' inclusion plays very central role. Time and scope they spent with children impact autonomy, achievement motivation and value creation (Grolnick et al., 2007: 259)²¹. Other important factor characterising this developmental stage are peers²² as they gradually take over parents role and present an important reference point.

These theoretical foundations eventually lead towards identification of determinants that impact vocational decisions. Approaches to this are different. Thurow (1975), for example claims that the prevailing logic for selection of educational and vocational path gravitates towards economic dimensions: probability of getting employment and expected earnings in the first place. Other authors (for example Holland, 1973/1999; Miller, 1984; Thomas in Thomas, 2002) stress as a prime motive personal predispositions and interests. Velden in Wolbers (2004) focus to both, and in addition strongly stress past educational and work experiences.

Another holistic approach towards conceptualisation of factors of vocational choice has been developed by Grubb (2002), that is in addition very much aware of socio-economic trends and accidental events of a certain moment. Author pool of factors includes: economic component of children, relative scope of alternatives, personal estimation of future success of certain career path, 'presence' of various events in the decision making process, and also absence of knowledge what individual should have been interested into in order to make a proper decision. Additionally, author indicates factors such as availability of proper information, network of family and friends, adolescence difficulties in identity formation, etc.

¹⁹ And this is, as well, one of the important aims of our study.

²⁰ More detail elaboration will be provided in the final report. Important issue is related to changes in adolescent motivation and learning – see author.

²¹ More detail elaboration will be provided in the final report.

²² Key concepts describing centrality of their role are sociometric popularity, rejection and group membership. See Wentzel, 2007: 279 for more details.

Other authors such as for example Gerrits (1985) or Lucas (1997) primarily concentrate on social environment and reference peers. They both have crucial impact on intellectual, social and emotional component in personal development. Aspirations and motives of parents can also be negative as parents often (Pregelj-Arčon, Skrt-Leban, 1998): project to children their own aspirations, build on children too high ambitions or limit children with their own limited knowledge of employment and work situation. These factors are particularly important in the event when pupils want to act outside family tradition.

Categorisation of factors that impact students vocational choices can be those classified as follows²³:

- a) external social factors such as family and peers network, including media and career counseling;
- b) own personal experiences with education and work of one's own (grades, experiences with school teachers, proximity of school in local environment);
- c) future expectations on vocational benefits related to own interest;
- d) economic expectations, such as ambitious towards high earnings and employment expectations and;
- e) other psychological drivers such as self-realisation, hedonistic values ²⁴ (recreation, party, sexuality), religious, status and success aspiration).

As elaborated by Ule (2007) indicated factors shall be studied within the context of general youth problems, in which economic dependency on parents, fear of unemployment, social isolation are increasing.

Key research questions in our study are related to most of indicated areas. They are:

- a) *Which are the main drivers for enrolment in VET? How much in fact is predetermined? Do students strive for material rewards or they seek for intrinsic motives of professionalism?*
- b) *How socio-demographic characteristics determine enrolment to VET, and in particular VET sub-segments? How school success in the past program determines enrolment into VET segments in relation to other characteristics?*
- c) *What is the relative freedom of primary school pupils in selecting further education in relation to past grades, family determination, physical and financial factors*
- d) *What is the real impact of career guidance services?*
- e) *How realistic are VET students' expectations from VET programs in the time of enrolment? How strong is really ones wish to become a VET student?*
- f) *Which are VET student's future career aspirations? How are they related to levels of education and sectors?*

In the next session we shift attention towards learning and teaching modes.

²³ Concept has been tested in Slovenian project (name).

²⁴ For further elaboration on this see Ule (2007)

2.4 Motivation, learning and teaching modes

In this section we aim to provide a short theoretical overview of learning theories and its implications for our study. In simple words we explore how students learn, what are the main drivers for learning and what is the impact of teaching. The comparative aspects of these concepts are related to VET systems in the following:

- (a) general principles and objectives of IVET;
- (b) relation between IVET and CVET;
- (c) involvement of social partners;
- (d) state and trends of pupils enrolments;
- (e) national structural framework and relation to industry sectors;
- (f) contextual arrangements of learning and principles of written and taught curricula;
- (g) links and regulations between practical and theoretical part of curricula;
- (i) assessment and progression arrangements;
- (k) educational vocational guidance.

In the continuation of this section we will first present concept of motivation, followed by information process learning, social learning, models of knowledge management and in the concluding part crystallise key research questions.

*Motivation and VET research*²⁵

Motivational theories that explain VET student behaviour can be best classified into two broad groups. *Content theories*, that study typology of individuals motives and needs, and *process theories* that focus on external factors of reinforcing individual behaviours. Hence, the first group studies personal motivation system, the second environmental factors.

Maslow's (1982) theory on hierarchical needs, assumes that all individual needs can be classified into hierarchical system from physical needs, needs of security and protection, belonging, self respect and self realisation – the last is on the top of hierarchy. It is important to stress that Maslow never claimed that person always satisfy lower needs first and than needs of higher order, only that higher needs can not be satisfied when lower ones are not realised to minimum extent (Kline in Ule, 1996: 163). Similar is Alderfer's three level hierarchical theory (1969) that reduces categories to three, namely needs for existence, relatedness, and growth and McClelland's differentiation between achievement, affiliation and need for power.

Comparable to Maslow and Alderfer theories is Herzberg's (1968) two factors theory stating that all individual's behaviour follows principles of satisfaction and dissatisfaction. Following Herzberg satisfaction and dissatisfaction present two distinct paradigms which are mutually independent, hence contrary to satisfaction is absence of satisfaction. Satisfaction is dependent on true motivations,

²⁵ To be upgraded accordingly.

labeled as intrinsic motivations, while dissatisfaction depends on extrinsic hygienic factors. Following author the first group depends on school and work environment, while the second on the content of work. Important conclusion therefore is that absence of hygienics do not imply higher motivation (at least not in longer terms), while they can decrease motivation.

Another author in the stream of content theories group is McClelland (1988), with theory of acquired needs. In contrast to Maslow, Aldfred and Herberd, author claims that rather than individual factors of motivation, there are distinct types of individuals, with inherently embedded motivational system. Three basic types, or affiliations are related to achievements, social ties and power.

Among *process theories* one of the most known is Vroom's expectancy theory (Vroom, 1995). With this theory author explains behaviour within organisations. Following Vroom three key processes than complements one another are expectancy, instrumentality and valence. Valence can be positive, negative or indifferential towards individuals behaviour or role in general. In this way individual follows positive situations and avoids those negative ones. In this, he estimates the possibility how well can be given task accomplished. Instrumentality is relation between personal expectancy for proper reward and opinion on the fairness of the rewards. Other authors in theoretical stream are also Locke (1991) with goal theory and feedback process, and Adam (1963) with equity, in which key focus relates to reference points (e.g. school grades of peers)²⁶.

Relevance of social and information-process learning approaches

Information process learning theories best describes how learning takes place in the classroom, at home and during assessment processes, so in simple words explains very well the encoding of external information along with the storage and recall of such information. Encoding relates to the processes of perception and interpretation which are vital to transform external stimuli into cognitive perceptions. Learning solely based on external stimulation can be explained as the »bottom-up« principle while learning that is a result of external stimulation and preceding knowledge can be explained as the »top-down« principle (Anderson, 1995). The closer the new information that is written is to the previous written information, the easier it is to recall the new information, during which a stereotyping of the senses occurs such as generalisation and the well-known problem of the 'halo effect'.

The described topics have a long tradition in cognitive psychology. Among the most well-known, it is worth mentioning Cyert and March (1963) who concentrated on the »acquiring of information from the environment«, the »distribution of information in the organisation«, the »condensation of outgoing information« and on the different modes of the »transmission of reshaped information from the organisation«. The connection between the abovementioned elements was later studied by several other authors (for instance, Hedberg, 1981; Huber, 1991; Lundberg, 1989 and Nonaka, 1992). Recent psychological approaches (for example, Larson and Cristensen, 1993; Hinsz and others, 1997) have continued this tradition. They focus on studying the optimising of the systems of decoding, memorising, recalling and utilisation of information in various learning situations.

Information process learning is a successful approach in simple contexts where the change of learned behaviour is obvious and consistent. However, in everyday life people often find themselves in situations with no obvious connection between cause and effect or where the reason is unknown.

²⁶ Link with VET is to be elaborated.

Learning in such contexts is more effectively explained by situation learning theories. In the case of this kind of learning the key question is how people establish causal connections in new situations via experiences and general rules.

The situation learning theories are based on learning via observation (Bandura, 1969), unlike classical and instrumental conditioning. If the individual recognises a certain way of behaving is rewarded he will most likely imitate that behaviour. The level at which this phenomenon unravels can be individual or in a group of people. However, the crucial factor is experience often gained in a spontaneous way.

Such an experience exchange often happens in various situations: between the master and the apprentice, between parents and their children, among adolescent peers (classmates), soldiers in the army etc. That is why learning is often connected to the problem of »forgetting« (Friedrich and Mandl, 1992) which is above all obvious when the individual tries to replace the knowledge he gained over a longer time in the past.

The basic communication of this theoretical paradigm says that situation learning most often happens in a non-formal way, possibly as an integrated part of some other activity (Kolb, 1976, 1984; Revans 1980). In this sense, Wenger (1999) and Grosjean (2003) draw attention to the difference between »knowing the practice« and »knowledge about the practice«. Within this spirit, Maier and others (2003: 24-25) state that:

- *learning is not always intentional;*
- *individuals imitate the behaviour of those like them;*
- *preliminary knowledge is always important (either as an accelerator or inhibitor of learning);*
- *learning is formed on the basis of causal connections; and*
- *learning is a motivated form of behaviour.*

An important author in situation learning theories is Argyris (2004) with his long-lasting concept of double-loop learning. The theory states that in the majority of organisations strong (self)defence routines that preserve the status quo are rooted. Changing these norms represents a changing of values, norms and organisation culture and consequently of the principles of operation. These processes are often very troublesome, lengthy and complicated, which applies to individual and organisational levels of processes. Argyris' findings are therefore very important for understanding the development of actual competencies which, however, represents the basic goal of learning in the education and work context.

Knowledge management models²⁷

Concepts that link both approaches – information process learning and social learning – have for our research powerful implications. They state that development of occupational competencies is a simultaneous result of information process learning and situation learning²⁸. Gherardi and Nicolini (2003) agree with this. They claim that situation learning is distinctively connected to the process of participation in the way an individual becomes a member of an organisation. Contrary to the concept

²⁷ Part of this chapter is co-authored with Ivan Svetlik.

²⁸ This has been very clearly presented on the organisational level through the concepts of socialisation and internalisation by Nonaka and Takeuchi (2004).

of participation, the complementary concept of reflection separates the subject of knowledge and the object of this knowledge: the individual is aware of his knowledge which means he is closer to information process learning. Only the combination of both learning methods represents that which can be called occupational or professional knowledge.

Theoretical models that clearly indicate that successful knowledge management is based on the complementary connection of both methods of learning, are for example Lundvall's (2001) three-phase model of the knowledge cycle; the knowledge spiral model of Japanese authors Nonaka and Takeuchi (1995) or Boisot's (2002) model of knowledge creation and dissemination.

The basic question on Lundvall's knowledge cycle refers to the role which should be played by VET institution in the knowledge cycle. Should they focus solely on a knowledge transfer or should they play a key role in knowledge creation and acknowledgement and, what is even more important, how deeply should students and lecturers be involved in individual processes and what goals should they pursue with this involvement?

The model of the knowledge spiral introduced by the Japanese authors Nonaka and Takeuchi above all focuses on the quantity and quality of learning as well as on the connecting of learning and work. The authors state that the best learning results as well as the best work achievements in an organisation area consequence of a suitable balance between information-process (internalisation) and situation (socialisation) learning. Further, knowledge utilisation, which can be observed via mental and physical externalisation as well as via the observation of the manipulation of data and information, upgrades learning processes and rounds them up in the sense of the crystallisation of work results. On this basis it is fair to consider how to connect learning at work in organisations with learning undertaken in education.

Boisot's model is with its difference from the previous two particularly important for understanding the methodology of teaching in VET as well as for the performance of learning processes. VET institutions should in such a manner represent a bridge between concrete and general situations and should be capable of teaching their students and occupational groups in which these students are entering. The abstraction and concretisation of knowledge in this context represent a mechanism of a professional group's adjustment to technological and social changes; but on the individual level these processes are tied mostly to the adjustment of the individual to organisational changes and the course of his career path.

By this we can conclude that the quality of learning and working depends very much on a suitable learning combinations. Even though the models overlap each other to some extent, each brings a somewhat different stress on the contents. If we arrange the key messages into a settled integrity we can then determine that for the successful development of a high school curriculum in order for it to ensure key competencies for the labour market it is necessary to search for an adjustment and uniting in the following directions:

- a) *Connections between the innovation, educating and employment spheres at the level of an individual high school institution and at the level of the system;*
- b) *In an education system and with the transition to the labour market we must not forget to adjust the three described domains (innovation, education and work) also at the level of the individual;*

- c) *The best learning results and work results are based on an appropriate combination of information process learning and situation learning: in this sense, experience from high school institutions shows that the best students are those who know how to connect knowledge with practice;*
- d) *The same applies to students as to teachers. Teachers who do not support their knowledge with researches do not easily transfer knowledge to students, especially not the competencies that are needed in the world of work.*
- f) *A qualified high school curriculum has to pay special attention to the balancing between knowledge abstraction (creation phase) and its concretisation and a systemisation²⁹.*

However, knowing the intensity of one or other method of learning at work or in the education system has, in our opinion, a double meaning. First, we realise the logic of occupational competencies at work or in the education sphere. Second, we acquire information about what type of people fit a specific profession or education system the best.

Motivation and learning theories and research issues

Optimisation of VET systems towards increasing individuals motivation to learn is one of the key topics of our study. All other research question in this part are related to it and are the following:

- a) *What are VET students' aspirations towards learning related to school, and how do they acquire knowledge after school?*
- b) *Is there any relation between learning in these two different environments?*
- c) *How well VET students perceive work of their teacher– in particular learning in the classroom teaching and in practoetical learning environment?*
- d) *How international mobility impacts learning? What drives and consequences it has in comparison to Erasmus program in HE?*
- e) *How are learning modes related to overall motivation in schools?³⁰*
- f) *Which teaching and learning modes impact VET students' school success in relation to acquired competencies? Is it possible to identify any typology behind both success principles?*

In particular the last question opens up the area to final section of competencies and school success.

2.5 Competencies and School Success

The main goal of this section is to provide brief overview of concepts competence, school success and in particular difference between both. Since studying determinants of competencies and school knowledge and success present a focal point of this study, further elaborations are presented in the

²⁹ Thereby the described balancing is not only sufficient at levels of the system and the high school institution, but otherwise these very different but complementary ways of thinking need to be transferred to students. These have to be capable of deeply focusing on a problem, drawing conclusions and connecting them with other knowledge.

³⁰ See Turner & Urdan, 2007: 297 more on information process learning from motivational perspective in classroom.

section 3, where we construct the model of our study. Hereby, we present summarise key research concepts.

Competences can be defined as the generators of potential for an individual's performance, personal characteristics (traits) as physical characteristics and methods of an individual's response to a situation, self-concept in the sense of habits, values and knowledge in the sense of information that someone has in specific areas (Spencer and Spencer, 1993: 9-10). This definition mostly describes individually acquired competencies, while employers' expectations are labelled as required competences³¹.

Formalised knowledge – general and vocational – as it appears in various forms of educational programmes hence present very different term in comparison to competence. This type of knowledge remains in several ways separate from general competencies, and especially tacit and specialised occupational knowledge. The prevailing characteristics of formal knowledge in the western world are the rationalisation that stipulates the pervasive use of reason, the possibility of measurement, and gaining at the end functional efficiency (Freidson, 1986: 3), and most above the possibility of its transfer and assessment in educational programs.

Professional Success. For individuals, the meaning professional success move along their career and life stages (Hall, 2002 cf. Demeter, 2010) and encompass sharp distinction when it shifts from education to the world of work. However, in both contexts the basic observation of careers distinguishes between objective and subjective career dimensions (Gunz & Peiperl, 2007). Following Mayrhofer et al. (2007) professional success is always relational, referring to person-related aspects of a career, his or her social origin, work and societal and cultural dimensions (Pavlin, 2011).

Yet, there is a clear distinction between success retained in school in comparison to success on the labour market. This study focuses very much on differences and similarities between school grades and acquired competencies³². Since the modernisation processes in education with the Lifelong learning policy principles, competencies have been introduced into education processes. The intersection between these two different spheres from the learning point of view gains tremendous importance in research: it is a question to what extent the educational knowledge as a results of information process learning can really be compared with practical knowledge that results in gravitates towards social learning principles.

Several authors even believe that the theoretical background gained in formal education has only a minor connection with the real work situation – it is described more as a legitimating tool of professional status. Svensson (1990: 52-56) for example also points out the lack of concrete studies of how occupational work really links to education. There are several reasons for this (ibid): firstly, occupational practitioners may not be aware how a theoretical background is related to a certain task required at work. Secondly, the nature of work tasks can often be so complex that the link with acquired formal educational knowledge might not be possible at all. Thirdly, often there are very severe theoretical tensions and contradictions within a certain discipline, so practitioners may favour

³¹ The definition of required competences is therefore closer to the definition of Kanfer and Ackerman (2005: 336), which labels work competence as organizationally valued tasks and performance. We should underline the fact that there is always a bias between acquired and required competencies when comparing individual occupational employees with selected job settings, and also when comparing employers' needs with educational programmes.

³² An excellent conceptual frame shall be developed for this; In the last decade, schools and public policies in the EU, but also the United States, aimed at obtaining higher standards, greater accountability and overall performance have legislated competences (a concept from the world of work!) in the educational domain (Ryan & Brown, 2005).

only one. Lastly, occupational jargon may be used much more in organisations and this penetrates daily work much more than professional and educational logics.

In a nutshell, we shall stress that on the most general level our survey seeks to explore what determines school success in relation to acquired competencies. It seeks to understand how are school success, acquired competencies (vocational expertise, foreign languages, ICT and some generic competencies) and school satisfaction interrelated. These issues and concepts are integrated into research models in the chapter 3.

3. Conceptual frameworks and development of the hypotheses

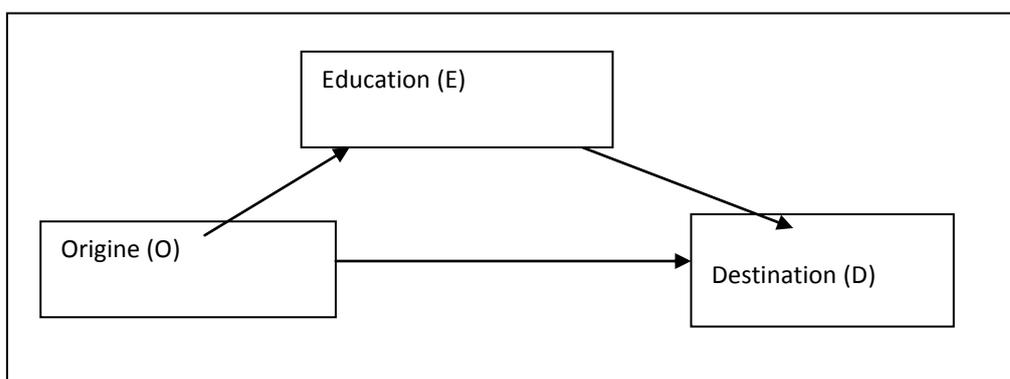
The main goal of this chapter is to construct conceptual frameworks that best support the development of the hypotheses. In this way the section integrates and further develops the key concepts presented earlier. It thereby frames the theoretical contributions with the policy challenges identified in the first section of this study.

3.1 Model of the Social Mobility Triangle: Origin, Education and Destination

The social mobility triangle, the so-called Origin, Education and Destination (OED), is widely accepted by sociologists (e.g. Jackson et al., 2009). It explores causalities among origins, education and professional destinations. The model questions the relative impact of education in comparison to family background and other factors, issues widely addressed by several projects and communities (e.g. DECOWE, 2011-), or how much education really matters (Wolbers and Velden, 2002).

In this context and in relation to VET, Iannelli and Raffe (2007), for example, coined the term “vocational success” with which they consider “the effect on the individual education to work transitions of taking vocational programmes in upper-secondary education”. The authors stress that this effect can be bolstered by stronger linkages between education and the labour market.

Figure 1: Social Mobility Triangle: Origin, Education and Destination

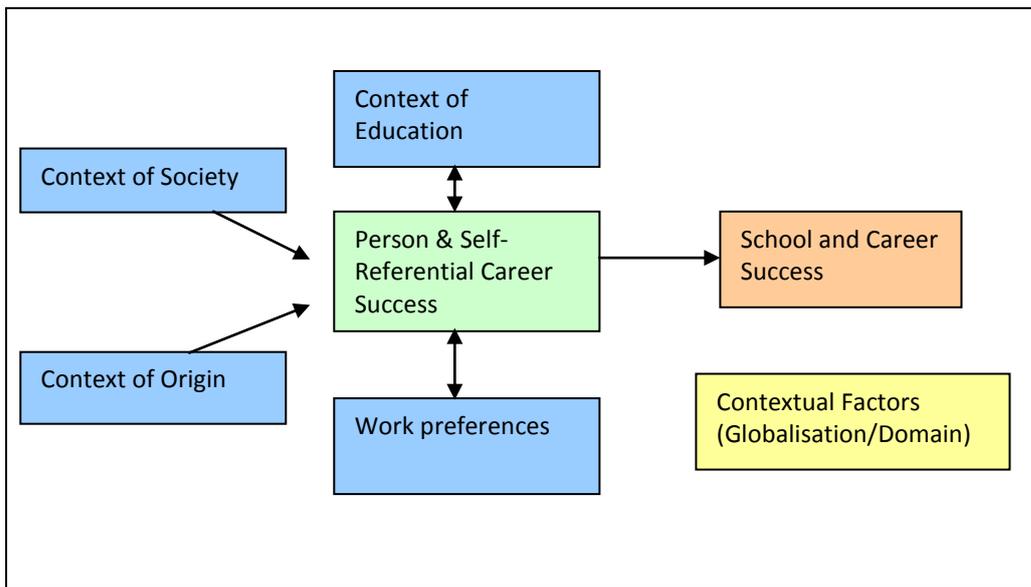


On this basis different and complementary models have been developed and to a large extent tested within career study approaches and for different segments of education. The OECD's Network B, for example, developed a framework for transition systems defined as "the social institutions and processes through which a society provides its members to make the transition from the education system to the employment system" (van der Velden, Wolbers, 2008: 13), focusing on proportions of school-level completion, the level of acquired competencies, the share of school leavers and quality of employment, to mention just a few. Other studies concentrate more on educational processes and school success. The key hypotheses and findings, segmented by countries, sectors or educational institutions? are well established (see, for example, Breen et al., 2004). Models study how different influencing factors determine the career success of particular individuals and social groups.

One of the more elaborated holistic developmental models distinguishes between individual success factors and subjective concepts in terms of individual contexts related to career factors (Demeter, et

al. 2010). In this way, it studies how career success is influenced by four main components, namely the *context of origin* which refers to a person's cultural, social, class and educational background as well as their work history, the *context of education* referring chiefly to teaching and learning modes and organisational characteristics, the *context of work experiences* encompassing different issues of work characteristics, and positions and the *context of society and culture* that involves societal and biographical data. The model has been designed in line with the theoretical premises of Mayrhofer et al., (2007).

Figure 2: Elaboration of EOD model developments



Source: Adjusted version according to Demeter, Chudzikowski, & Pavlin (2010).

The final version of this model aims to measure differences between objective and subjective elements. These considerations are also very relevant when it comes to designing the model used in our study. Three directions relevant to our study are (*adapted from*, Tsakarissianos, 2008: 91):

- a) *family background more importantly determines career aspirations than acquired competencies and school success;*
- b) *women's career aspirations are determined differently than those of men;*
- c) *parents' education and occupation status impacts students' career aspirations in combination with one's social network and material status comparatively; and*
- d) *there are important differences across EU countries.*

In our study the hypotheses developed on this basis will be placed in the context of national VET developments.

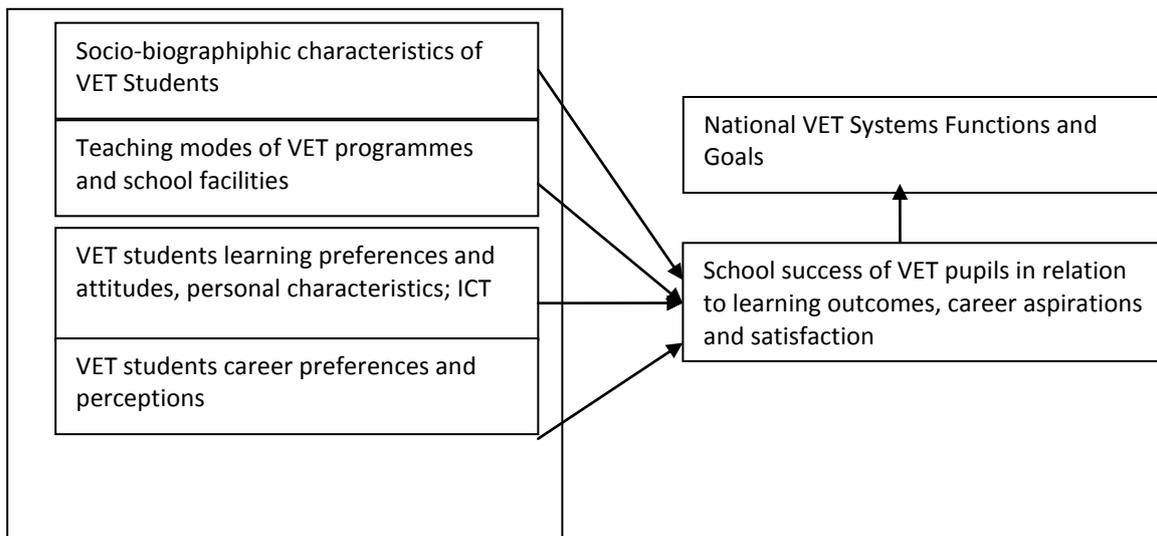
3.2 The research model used by this study:

Determinants of school success in relation to acquired competencies

As indicated in the introduction, school and career success generally are attracting increasing attention in VET research because they impact on individuals' employability capacities. Accordingly, evidence about this is vital for designing VET curricula in terms of their labour market orientation, congruency with industrial sectors, and further education and occupational segments. In addition, the model fits well into the policy development debate which seeks to improve skill development, social inclusiveness, to change access to different educational structures and the labour market, to raise the general status of VET and recognition of prior learning as a competitive system to VET and to orient more towards student-centred teaching principles.

The model (see Figure 2) explores how four main components, namely a) socio-biographic characteristics, b) learning modes including work experience, c) experiences with teaching, and d) career preferences impact the three (questionably) interrelated components of school success, acquired competencies and satisfaction. In particular, the model seeks varieties and complementarities between subsystem levels and on a cross-national basis.

Figure 3: Conceptual Framework of Our Study



In line with the general goal, the study aims to develop typologies that best describe the multidimensional concept of school success and its determinants. The model looks for varieties and complementarities between subsystem levels considering country specifics. They are briefly presented in the next section.

3.3 Comparative perspectives on international research into VET systems

There are several ways to approach the question of how to construct the most important reference/comparison points for surveying the VET population. We mention three of them here.

The first approach encompasses *comparisons from within*. This approach explores the internal characteristics of a broad domain-specific VET cohort in one country. The elements of comparison (break variables are):

- *Gender³³, ethnicity and other sociobiographic dimensions referring to parents' education, occupation and material status*
- *The sectoral orientation of VET (sub)programmes towards sectors of the economy, starting with the most basic differentiation between industry and services (a horizontal comparison).*
- *The type of VET programmes, referring in the simplest terms to duration and permeability paths to post-secondary educational programmes.*

The second is comparison from above. Clearly the VET population can be compared with the population in general education, and only in some respects with the population in primary education, the labour market and other post-secondary educational structures.

The third group encompasses country comparisons from the viewpoint of the variety of VET systems. This issue is particularly sensitive since the VET system relates to both education but also various aspects of the world of work. However, some conceptual frameworks have already been developed. One of them is the CATEWE consortium³⁴ that explored variations and particularities of different national education systems. A summary of the consortium's recommendation on country comparisons follows (CATEWE General Results, 2011):

- a) Education systems should be surveyed in the context of demographical and migration trends, economic developments and labour market characteristics. It is expected that national value systems play an important role too as they shape the general vocational and occupational perceptions.
- b) Second, education systems are experiencing tension between standardisation and differentiation. These tensions can be seen in multiple directions such as, for example, (inter)national vs. local governance or general vs. vocational orientations.
- c) Third, vocationalism in education is highly predetermined not only by historical educational system developments but also by the dynamic relationship (linkages) and labour market regulation of education and the labour market as described in several disciplines (e.g. socioeconomics, sociology of education, sociology of professional groups...); and
- d) Fourth, there is no evidence of convergence in terms of educational attainments in the type of education across countries; however, in all European countries among youth the project found a) high unemployment rates; b) low quality jobs compared with those held by older groups; and c) the level of formal education and macroeconomic trends as strong predictors of job success (CATEWE pp. 6-7).

Fifth, policy recommendations in the CATEWE project stressed the need for the high level of diversification of policy recommendation and national adaptations.

³³ See for example Durik & Hyde, 2007: 375 on key reference points.

³⁴ Elaborate the title.

One of the principal premises for the international comparability of VET systems relates to VET enrolments. The results of Lasonen & Gordon (2009: 36) compare enrolments in European countries³⁵.

Table 1: Enrolments and qualifications in the EU

Enrolment in VET (ISCED3)	Country examples	Options available for students
Above 54 percent	Austria, Germany	Both vocational and general
45-53 percent	Poland, Sweden	Double qualifications in some countries
10-44 percent	Greece, Latvia, Lithuania	Vocational and general
0-9 percent	Ireland	Mostly General, Some vocational

Source: Ajusted version by Lasonen & Gordon (2009: 71).

It is important to stress that in international studies of education systems, VET and the transition from education to the labour market in particular, two areas usually determine country clustering: the internal labour market with its production organisation logics, and occupational ones with a stress on training and qualification (Robert, 2009: 51). The author presented a typology in which he identified several country clusters; for example, countries with strong labour market legislation and occupational labour markets (e.g. Austria, Germany) and countries with weak labour market legislation and internal markets (e.g. the United Kingdom). These characteristics are important when it comes to interpreting the development of students' competence. They are to a certain extent related to another country's typology for VET which refers to tightly coupled (dual) systems such as in Germany and Austria, and loosely coupled systems such as in Italy and France.

While the universalistic approach tries to identify universal principles relative to a common pool of countries or country clusters, the particularistic approach focuses on a smaller number of countries and tries to explain in a comparative fashion the variations within them (see CATEWE, 2000: 29). This means that the extent to which VET-related items can be compared across nations varies to a large extent and in relation to other comparative reference points. However, in the most general terms the key principle guiding how to observe VET processes in a country comparative fashion is to look at the purpose of the qualifications it produces. This involves the following aspects (CEDEFOP, 2009):

- a) *recognition of personal growth through learning engagement;*
- b) *preparations for further learning or subject areas;*
- c) *preparations for employability;*
- d) *confirming occupational competencies and licensing for practice; and*
- e) *updating and continuous professional development.*

³⁵ Check Lasonen & Gordon (2009: 36) and elaborate further comparisons.

In the next sections we will proceed towards an analysis of the results of the international project “Detailed Methodological Approach to Understanding Vocational Education and Training”. On the consortium level this will be done in the following way:

- a) by presenting the methodological background, and data collection process;
- b) by presenting a short VET background of one country;
- c) by analysing descriptive statistics for that country;
- d) by a further theoretical elaboration;
- f) by determining the key composed variables;
- g) by a meta regression and LISREL analysis;
- h) by adapting and further elaborating the research hypotheses;
- i) through an international analysis;
- j) by interpreting national data; and
- k) via an international data interpretation and completion of the study’s final report.

However, in this version of study only the first three steps will be considered, and to some extent also a theoretical elaboration in the concluding section.

4. Methodological background of the large-scale survey in seven EU countries

The research study has been developed within the EU project “Detailed Methodological Approach to Understanding Vocational Education and Training” that integrates theoretical backgrounds and secondary analyses of existing documentation with developments of own quantitative and qualitative empirical steps. The project’s essential methodological component is a large-scale survey among VET students in seven EU countries: United Kingdom, Germany, Austria, Lithuania, Latvia, Slovenia and Greece. In methodological terms, the project comprises the following main steps:

The first step relates to ensuring an overview of key VET developmental and policy issues, including a review of secondary sources and national workshops.

The second step includes the development of the research instrument that broadly enables a comparison of the VET population in seven EU countries.

The third step comprises the testing, sample design and implementation of the large-scale survey questionnaire.

The last step that accompanies all project stages is preparation of the final report.

The research instrument – a questionnaire – was designed progressively based on a study of the relevant theoretical literature, national and international policy workshops, and a thorough review of

comparable questionnaires. Its main purpose was to support the study of the concepts presented in the previous sections.

In line with the overall research goals and possibilities the target gross sample in each country was limited to 2,000 VET students, with two-stage sampling and an expected overall response rate of 50 percent. Overall, more than 700 schools and 15,000 VET pupils were approached. This enables a broad horizontal (the main programmes related to economic sectors) and vertical (duration and type of VET studies) comparison within each country and also comparatively. In addition, researchers in Slovenia also conducted a standalonesurvey among students (the same age group) in general education with a gross sample of approximately 1,000 students.

After extensive consideration and taking the key survey goals into account, the research team decided to sample 17 and 18 year old VET students with minor country adaptations corresponding to progression levels. Different stages of education (classes) require special caution in the interpretation of the results in line with the interpretative framework. However, it is this age group that intersects all key VET programmes in the surveyed countries. This population is able to well assess the reasons for selection of a particular VET program, the programme characteristics (teaching and learning in particular), and is already aware of future career perspectives.

Once the questionnaire was designed and translated from English in six other national languages it was tested with focus groups, which served as an instrument to form a deeper understanding of the variables and feasibility aspects of the questionnaire.

5. Preliminary Results: A Case of Slovenia

5.1 Characteristics of VET in Slovenia

a) General Overview

Educational system in Slovenia follows German tradition: formal school education is highly valued in comparison with informally acquired knowledge (Kramberger, 1999). It has clear structure of publicly funded pre-primary, primary, secondary and tertiary education. Even though not obligatory, 98 percent of population between 15 and 19 enrolls into *secondary education* which is in broad terms divided between technical and vocational education (*secondary technical and professional, secondary vocational, vocational technical, and short-term vocational education*), and general secondary education (*general and technical "gimnazija"*)³⁶.

The central governing body in all primary and secondary schools is a School council representing parents and teachers, and in the case of VET schools also social partners. These bodies confirm yearly plans, extra activities and finances, discipline, and confirm head teachers. This school segment has a very limited influence on educational and financial decisions. They are strongly determined by the law and national regulations under jurisdiction of Ministry of Education.

³⁶ http://portal.mss.edus.si/pls/portal/docs/PAGE/PORTAL_SOLSTVO_MSS/MSS_STRANI/MSS_DOKUMENTI_ZA_SPLET/SLOVENSKI_SOLSKI_SISTEM_V_STEVILKAH.PDF str 11 - 12

VET programs are typically conducted in upper vocational schools or school centres providing multiple vocational programmes under one roof. Some school centres also include post secondary vocational education and specialised gymnasiums. In this way VET infrastructure enables smooth transfers between programmes for pupils and teachers, and creation linkages with industry in local environment.

In a nutshell, one can conclude that VET structures in Slovenia are widely spread through the secondary school system, has strong links to tertiary educational system and also to settings outside formal education system. The concept of VET in Slovenia is in this way viewed as an integral part of lifelong career. However, it is important to stress that VET system in the country is expected to be increasingly supported by out of school knowledge certification such as national vocational qualification system .

b) Fundamental structures, principles and objectives ³⁷

One of the most widely accepted traditional observation point of fundamental educational principles related to knowledge, competencies and qualifications in Slovenian has been coined by Muršak (1999), determining broad-based educational qualifications as the general level of education and, narrow-based vocational qualifications between different types of vocational qualifications encompassing key vocational qualifications, basic vocational qualifications and supplementary vocational qualifications (Muršak, 1999)³⁸.

VET curricula follows subject division which is in the last years organised around modules. In this context general and technical subjects are disciplinary based: structure of tracing follows pattern: “from general laws and principles to concrete practical solutions”. Subjects are conducted on general and specific objectives, didactic principles and recommendations for inter-subject connections which help teachers structure the events. The prevailing teaching mode are lectures supplemented by exercises, workshops and field work – the freedom in choosing different methods is increasingly given to teachers. Fundamental objectives of certain educational structures are:

Short Vocational Upper Secondary Education and Training

This level is opened also to pupils with unfinished primary education aimed at revising primary school knowledge and at the same time training for somewhat independent work. Courses last two years and the half and end with the final exam. The successful completion of a shorter vocational education course allows candidates to enrol into any other vocational or technical upper secondary education course.

Vocational Upper Secondary Education and Training (3-years programs)

These programs train students for occupations at the level of skilled workers. They end this with the final exam. Programmes have a pronounced general education component as the graduates are in the position to register into additional two-year vocational and technical education programmes (+2 year programmes).

³⁷ Eurydice: Organisation of the education system in Slovenia (2008/2009). Available at: www.eurydice.org.

³⁸ Muršak, J. (1999). Qualifications, competences, professions: synthesis attempt, *Sodobna pedagogika* (Contemporary Pedagogy) 2, 28-46.

Technical Upper Secondary Education and Training (4-years programs)

These types of programs are usually run 4 years, with some experimental programs of to 5 years. Pupils conclude them with the vocational final examination (poklicna matura) leading to qualification of a technician, which allows students to enrol into higher education.

Specialist Gymnasiums (4-years programs)

Specialist gimnazija run for four years and are divided into *technical gymnasiums* covering wide range of technical fields (e.g. engineering, electrical engineering, computer science ...), gymnasiums specialised in economics and gymnasiums specialised in arts (Music, Dance, Arts, Theatre and Drama).

c) Main VET structures and their linkage to industry sectors

Slovenian mainstream VET area – three and four year programs on the upper secondary level – are characterised by the large spectrum of vocational programs related to (sub)domains of economic sectors: currently the system is financing over 50 programs what is quite striking taking into account only 40.000 enrolled VET students in total at this level. In the table 2 we provide a short overview of the main programs related to main geographic sector.

Table 2: Current major three and four year VET programs at the upper secondary education level related to the main economic sectors

Agriculture & Fishing	Manufacturing & electricity	Construction
Florist (3 years)	Electronics expert (3 years)	Sign painter (3 years)
Agricultural Mechanic (3 years)	Energetic expert (3 years)	Chimneysweeper (3 years)
Farmer (3 years)	Electronics technician (4 years)	Dry assembly construction contractor (3 years)
Gardener (3 years)	Energetic technician (4 years)	Stonemason (3 years)
Agricultural technician (4 years)	Computer technician (4 years)	Stove maker – ceramist (3 years)
Gardener technician (4 years)	Telecommunication techn.(4 y.)	Paint decorator (3 years)
Farmer – housewife (3 years)	Metal designer (3 years)	Carpenter (3 years)
	Car servicer (3 years)	Mason (3 years)
	Car body worker (3 years)	Geodetic technician (4 years)
	Mechatronic operator (3 years)	Building technician (4 years)
	Roofer (3 years)	
	Toolmaker (3 years)	
	Mechanical technician (4 years)	
	Dressmaker / tailor (3 years)	
	Textile maker (3 years)	
	Shoe Maker (3 years)	
Trade & finances & administration	Education	Tourism & Transport
Administrator (3 years)	Pre-school educator (4 years)	Cook (3 years)
Shop assistant (3 years)		Waiter (3 years)
Designer technician (4 years)		Guide technician (4 years)
Economic technician (4 years)		Marine mechanical techn. (4 years)
		Navigation technician (4 years)
		Traffic technician (4 years)

Health and social work		
Pharmaceutical processor (3 years)	-	-
Pharmaceutical technician (4 y.)		
Nurse (3 years)		
Laboratory technician (4 years)		
Health care technician (4 years)		
Dental technician (4 years)		

Own overview.

As can be seen from the table 3, the largest number of programs has been developed in sectors related to manufacturing and electricity, followed by construction work. Other economic sectors, such as for example education, or trade and finances have fewer number of programs. However, number of programs linked to economic sectors does not reflect number of enrolments.

Table 3: Enrolments into the first year of programs at the upper secondary education level (VET and Gymnasiums) related to the economic sectors, 2008

	No. of enrolled students	%
Agriculture	1177	5,1%
Forestry	29	0,1%
Textiles	82	0,4%
Chemistry, Pharmacy, Rubber Processing and non metals	242	1,0%
Wood Processing	612	2,6%
Construction	458	2,0%
Catering and Tourism	1194	5,2%
Economics	4322	18,6%
Paper and Printing	108	0,5%
Electrotechnics and Computer Science	1487	6,4%
Mechanical Engineering	1892	8,2%
Transport and Communications	271	1,2%
Mining	13	0,1%
Health care	1284	5,5%
Teacher Training	381	1,6%
Culture	93	0,4%
General Education (Gymnasiums)	9151	39,5%
Personal Services	386	1,7%
Total	23182	100,0%

Source: Statistical Office of the Republic of Slovenia, 2008.

As can be seen from the table 3, the largest proportion of enrolments is consumed by gymnasiums: approximately 2 out of 5 pupils. The highest share of pupils in VET is related to programs linked to economics (almost one out of five of total population), while other sectors encounter small shares: mechanical engineering (8,2 percent), tourism and health care (approximately 5 percents each. The smallest proportion of new enrolments is encountered in VET programs related to forestry, mining, chemistry and culture.

d) Education Job Match

Lastly, important information for VET surface overview is percentage of graduates with matching education to current job. In theory this is linked to horizontal matching problem what in practice answers the question to what extent should VET be program diversified, in what way it should be balanced between production of ready made skills versus development of lifelong career, and lastly, how it should balance between theoretical and practical learning. Overview, in the table 4 was prepared by the Statistical Office of the Republic of Slovenia and indicates some exemplary occupations by the share of newly employed VET graduates who have according to Statistical Office criteria matching VET education.

Table 4: Percentage of graduates with matching education to current job

Occupation	% of graduates with matching education (to current job)
Building technician	61 %
Electronics technician	54 %
Mechanical technician	59 %
Computer technician	44 %
Logistics and transport technician	24 %
Dental technician and assistants	93 %
Purchasing officer	40 %
Pharmaceutical technician	89 %
Cook	68 %
Waiter	40 %
Florist	69 %

Own calculation, adjusted by Slovenian Statistical office, 2011-.

As can be seen from the table 4, the highest proportion of newly employed graduates with matching occupation is in occupational destination dental technicians (since this is highly regulated job), followed by pharmaceutical technicians, florists and cooks. The smallest proportion of ready made VET entrants can be found among logistic and transport technicians, waiters and purchasing officers.

e) Enrolments

In the table x, we present Slovenian students at the secondary where 3-years vocational programs refer to graduates of three year programs, technical and professional programs to 4 years (and +2 programs) and gymnasiums. One can see that in the school year 2008/09 approximately 40 percent

of graduates at the secondary level completed studies at gymnasiums and 60 percent in different forms of VET. Within VET approximately one third graduates completed 3 year VET programs, and the rest four year program or ‘+2 program’.

Table 5: Total number of Slovenian students at the secondary level from school year 2003/2004 onwards by mainstream studies

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
<i>Vocational program (3 years)</i>	23170	21293	19566	17564	15701	14247
<i>Technical and professional program (4 years and +2 programs)</i>	40664	40786	40335	39468	38240	36994
<i>general gymnasiums</i>	37319	39797	37813	37240	35651	34243

Source: Statistical Office of the Republic of Slovenia, 2010.

In addition, it is important to stress that adults’ enrolments in VET structures is increasing, in some segments countering almost equal proportions to youth enrolments: even though organisation of their curricula is different: courses are conducted in the afternoon – the responsibility for their implementation is in most cases given to same schools and teachers as for youth. In the future, there is a question whether these two structures will co side, or stay separate.

f) Practical orientation of VET systems adequately prepare graduates for labour market

Slovenian mainstream VET system is characterised by small share of practical training, what is in particular the case of 4 year programs. Also the new Vocational Education Act of 2006 still limits practical learning primarily to 3 year programs.

In these programs students with an individual learning contract attend practical training up to 53 weeks in the course of education, while student with collective learning contract 24 weeks education of an apprentice in the working process takes 38 hours per week.

School providers consider practical training as logical and enriching part in relation to theoretical part of curriculum. In this way, VET curricula in Slovenia is characterised by general and professional education and practical training. The first two categories are typically conducted in class, while practical training is either conducted at employer or within school training facilities. The responsible person for conducting practical training in school is teacher responsible for practical training, while in work settings the responsibility is given to mentor. The program acts that regulate practical work (source CPI) are aware that practical training outside school enables goals that can otherwise not be accomplished within school itself. In particular personal development, vocational socialisation and development of vocational competencies are emphasized.

On the system level cooperation between school and enterprises present basis for development of social partnership in terms of cooperation between school and future pupils employers. Also in declaration acts related to practical training (source CPI³⁹) a strong dialogue between schools and employers is importantly stressed as developmental tool for implementation of common projects, promotion and other more market oriented forms of cooperation.

³⁹ http://www.cpi.si/files/cpi/userfiles/Datoteke/evalvacija/Porocilo%20o%20PI_2009_lekt.pdf

For this reason development, preparations and implementation of practical training is being conducted in close cooperation between teachers of practical training, teachers of professional modules and organiser (employers) of practical training. Final implementation plan is however, conducted also on the level of employers' organisations. Currently, there is still large room for improvement in this respect.

g) Involvement of social partners

Part of VET the educational programs in Slovenia is by law, determined by consultation with social partners. The so-called open curriculum (20 percent of all curricula) is related to local needs and particularities of employers. More precisely, it is school council which appoints »a quality assurance committee« comprising representatives of employers, students and parents⁴⁰ in addition to teachers' staff. Social partners in consultation with governmental bodies determine framework of qualifications for each industry, appoint their members to final examination committees, assist in organisation of practical training and advice in students vacancies. In this way Slovenian VET is characterised by strong social partnership in creation of educational syllabi, apprentices' arrangements and practical work. Below we provide involvement of particular institutions to social partnerships and their particular responsibilities:

- *Trade Unions, Chambers and Employers:* Initiating new VET programs, developing occupational profiles, and standards, appointing expert committee members;
- *Employers:* Organisation and implementation of practical curriculum;
- *VET Schools:* implementation of programs, implementation of practical training;
- *National Institute for Vocational Education and Training:* Methodological development, management of and administration of expert groups for curricula and occupational standards and catalogues;
- *Ministry of Education and Ministry of Labour:* Confirming public finances for public programs implementation and keeping register of providers (schools and teachers) and enrolments, confirming standards and occupational standards;
- *National Assessment Centre:* Organising final assessment; implementation of assessment; informing applicants about the results.

In this way all social partners are involved in creation of VET curricula, however its implementation is primarily in domain of schools. Some chambers also conduct distinctively profiled assessments (e.g. master craftsman exams, foreman exams ...). In balancing enrolments a special role is provided by the Ministry of Labour who encourages employers to provide education and training and unemployed to enrol in programmes that prepare them for occupations where shortages occur⁴¹.

h) Key policy issues

⁴⁰ Eurydice: Organisation of the education system in Slovenia (2008/2009). Available at: www.eurydice.org.

⁴¹ Eurydice: Organisation of the education system in Slovenia (2008/2009). Available at: www.eurydice.org.

VET in Slovenia is currently facing several policy challenges mainly related to intersection between world of work and education. In a broader context these issues are at the first hand related to employment and employability of overall population. Some major points of concern are the following:

- Which vocational and sector profiles should government foster and what is the proper balance between industry and service related occupations?
- It is little known what can be done to raise status of VET programs, which are over last years experiencing significant fall in enrolments in comparison to general educational programs.
- An important consideration is related to question if pupils should go on the labour market after completing VET programs, or it is more prosperous for them to continue with studies.
- It is not known how much should be practical scope of VET programs emphasized, neither if qualification shall be broader or narrower. Not, only in Slovenia, but Europe wide it is not known if competencies are best developed in the context of work related tasks or general subjects.
- Next point of concern is involvement of adults and drop outs in continuous education. Mohorčič Špolar et al. (2005) identified the problem that less educated adults are less likely to take and form of continuous education, and in this way exposed to risk of social exclusion. In this respect continuous education aims at improving the level of education, education and training for the needs of the labour market and general adult education and learning⁴². Currently, it is not known which of three pillars shall be more promoted.
- VET curricula for students with special needs in Slovenia shall be discussed in two ways. First, linked to supplementary professional assistance, additional equipment and organisation of work in smaller groups for students with special needs in smaller extend. Second premises are related to specialised institutions and programs for the deaf and blind children, children with physical disabilities and children with severe emotional or behavioural problems and schools offering the adapted programme.
- The functional and status positioning of national vocational qualification vis-à-vis VET in formal education is quite unclear.
- On the level of schools and national governance it is not clear which segments of VET should be privatised, and which remain as key national funding.
- Slovenia is currently establishing National Qualifications Framework (NQF) related to several professional fields. At the moments is not clear to what extent implementation of this framework will in practice contribute to repositioning of VET certificates.

Other points of policy concern related to VET are similar to those on EU level and are related to a) accessibility of education on the regional level, b) decreasing dropout rates, c) promotion of permeability to upper educational levels and d) increase in participation of old population into

⁴² Eurydice: Organisation of the education system in Slovenia (2008/2009). Available at: www.eurydice.org.

education. This section needs to be upgraded with issues raised at national workshops. These are below (same as in National workshop report):

- In which direction should the link between VET schools and HE develop?
- What should be the relationship between VET and National Occupational Qualifications?
- What should be the role of guardians as facilitators of VET student social development? (Example: School Centre Ptuj every teacher takes care for app. 10 pupils, helps them solving school and out-of-school problems)
- How should the system be linked between employers and social partners? What is the role of both of them?
- How could VET get more reputation?
- How should the system take into account migration flows?
- Are there too many programs? Should we follow aggregation or not? How to coin links with general education?
- Should VET program providers organise according to school centres or VET programs?
- Does financing system 'per-head' diminishing quality of VET?
- How should modular development progress in the future and what relation should it have to learning outcome approach?. (OECD 25)

The main Slovenian official challenges on VET will be presented in the new White Book end of the year 2011. At this point we presume these will be related to

1. Does Slovenian VET area need so strong diversification (so many) VET programs?
2. The link between upper secondary VET and post-secondary professional VET education should be strengthened.
3. National vocational qualifications should importantly complement VET system as we know it today, but should at the same time conotate its unique character.
4. VET area should increasingly take over the responsibility for personal, societal and professional development of VET pupils.
5. The ICT offers highly unexplored potential at all VET levels, and also prior to VET enrolments and afterwards.
6. There is still a large room for improvement in relation to cooperation between schools and employers.
7. The current status of VET programs should urgently be improved.
8. The issue of migrant in VET schools should specially be considered.

In the nearest these issues will be approached internationally.

5.2 Survey Results and Discussion

This section gives an overview of preliminary results of the project *Detailed Methodological Approach to Understanding the VET Education*. The structure is presented in the following key sections⁴³:

- *Socio-biographic characteristics;*
- *Transition to VET;*
- *Learning, teaching and characteristics of characteristics of VET programs;*
- *School success, acquired competencies, ICT and school satisfaction;*
- *Future Career Aspiration.*

Since this report has been prepared during completion of data collection process and its main purpose serves as mid-term elaboration of detail hypothesis, all sections look only to descriptive statistics.

A Short Overview of Socio-biographic Characteristics

Surveyed population in this version includes 768 VET pupils (n=51200), sampled from 40 schools (n=160) and approximately 50 VET programs (n=51200), differentiated by duration and sector scope. Main sociobiographic characteristics of surveyed population can be summarised as follows:

- a) *Sample encompasses 55,6 percent boys and 44,4 percent girls what approximately correspond to ratio of population enrolled to VET.*
- b) *Age structure is perfectly expected and in line with general methodological frame: 17 years (49,5 percent), 18 years (40,0 percent) and 19 years (6,4 percent; related to individuals repeating the class).*
- c) *One out of five VET students live on his or her own, and one in twenty in a student hostel. The rest (70,9 percent) at their parents.*
- d) *Interestingly, the vast majority of population comes from a small village or country side (51,2 percent), while from big cities there are only 14,4 percent of population.*
- e) *68 percent of population attends 4-year technical vocational program, and 32 percent 3-year practical occupational programs, what broadly corresponds to national statistical data from 2010.*
- f) *Approximately 57 percent of students' fathers have also vocational education and surprisingly only 3,5 percent general education (gymnasium), approximately one out of four education above secondary level, and the rest below secondary level.*
- g) *Approximately one out of four parents (father and mother) has flexible work arrangement, and three out of ten work additionally in order to create additional income: only every second VET student experiences at home comfortable financial situation.*

An overview of social determinants in this section is very short due to limitations of this paper. Survey in particular offers rich data on VET students' material status, however further considerations need to be undertaken in order to properly develop an analytical framework. Further details will be in comparative fashion presented in the future reports.

⁴³ For detail statistical overview see Appendix 1.

Considerations for the development of detailed hypothesis

Detailed studies of socio-biographic characteristics have become one of the central issues of our study since they contribute to understanding the extent to which VET education should strengthen its socially inclusive function (general skills) *versus* specific skill development (preparations for work). For this reason, the research items in this section will be used in two ways. They will be subject of their own detailed analysis and used as break and control variables for studying other research concepts.

Transition to VET

In this part we describe determinants of populations transition from primary education to VET. It is important to stress that transition from primary education to VET shares similar theoretical frame as transition from VET towards post secondary educational structures or labour market, however both transitions are hereby splited in two separate sections due to overall report logic (input – process – output).

We start the section by looking which factors are more important for enrolment into current VET programs and which less. In the survey VET students were asked this in three different ways. First, how important were certain factors for selection of their current program, and second, which were major sources of information⁴⁴. Lastly, they were also asked if they were considering any alternatives, or in other words, what was their relative freedom of secondary school enrolment (ranging from 0 to 3 and more alternatives). Survey, however, also unable to study this issue indirectly by considering their material status in combination with distance from home to school.

The highest mean values have been detected in two conceptually distinct variables: a) the occupation(s) related to the programme appealed to me (intrinsic motivation), and b) employability aspects related to further education and good job prospects. Other aspects retain all lower values such as for example program status, distance from home, parents and peers recommendation (difference between the two was very small), or school teachers.

Parents, family members and peers present to students very rich source of information, however from the perceived view point of VET students with very low impact. From our results, the major information source for selecting VET program were informative days / fairs, that in Slovenia last two days, approximately few weeks before the final selection of school program needs to be indicated. The weakest source of information for enrollment decision were school teachers, career advisors and job center (in the case of Slovenia run by the governmental Employment Office).

Results on alternative programs in the selection process indicate every second VET student considers only one alternative while one out of or more than one. Following results, one quarter of population do not consider any alternative.

Considerations for the development of detailed hypothesis

⁴⁴ Both on a 5 point scale ranging from 1 (not at all) to 5 (to a very high extent). This scale has been with minor adaptations used also in most other areas of survey (if not indicated differently).

Evidence on the determinants of enrolment processes provides a very rich source of information for further scientific research. An initial overview of the results pertaining to the transition from primary education to VET provides the following premises for elaboration of a detailed hypothesis:

- a) All determinants require further comparative analysis by all major control variables starting with sex differences. A particular focus should be differences among short and long VET programmes; one can assume students who enrolled in shorter VET programmes were less intrinsically motivated in the selection process, and their spectrum of choice was much more limited;
- b) clearly we can presume that the enrolment determinants of VET programmes are multidimensional. They vary in terms of the richness and relevance of information, the time span in which they affect a pupil, and also the extent to which pupils are aware of their impact;
- c) this emphasises the need to develop robust typologies in terms of indicated possible combinations of different factors along with typologies of VET students in terms of their decision-making; and
- d) these typologies would offer good knowledge regarding the understanding of predetermination and the relative scope of VET programme selection.

In the next section we focus on learning and teaching

Leisure time, learning and teaching

This section describes how VET pupils learn and how they assess work of their teachers. We first start by looking at learning, holistically approaching different forms of learning, and in different contexts. We start by looking at time VET pupils spent for out of school activities, compare this to time they spent for school work, then we focus to the question if they already approach paid work, describe the characteristics of school based training and at the end look into classroom teaching. Assessment of teaching and school setting follows latter.

In the survey, VET students were asked how much time on the average day they spent for out of school activities. The values were ranged in 6 categories from no time at all to four hours and more. In the table x we present results for six categories, namely watching television, reading books, spending time with friends, social networking on internet, doing sport and communicating to school.

Table 6: Time spend for out of school activities (in percent)

	Watching television	Reading books	Spending time with friends	Sport	Social networks	Commuting to schools
No time at all	13,7	63,6	3,6	26,4	9,2	15,7
Up to one hour	32,5	23,8	15,0	28,4	34,0	47,0
One hour until up to two hours	26,8	6,7	20,3	18,9	25,5	24,8
Two hours until up to three hours	16,9	2,7	23,1	10,5	11,5	6,5
Three hours until up to four hours	5,0	1,2	15,2	7,0	6,9	2,1

Four hours or more 4,1 1,1 21,8 5,9 9,9 2,9

Question C5 (7EU VET): How much time on an average day do you usually spend doing the following things? If you don't do certain things daily, please estimate how much time it is if you distribute on each day. Percentage of respondents who chose one of the answers in the table.

As can be seen from the table x more than six out of ten pupils do not read books and but almost 90 percent watch television, every second more than one hour. Interestingly they spend a lot of time on internet social networks such as is facebook: every second more than one hour and one out of three more than two hours. They still spend relatively a lot of time with peers: two out of three more than two hours. Some of this time might overlap with the time they commute to school: more than two out of five more than one hour.

VET students in Slovenia at the age 17 to 18 in most cases do not perform much paid work: only one out of 10 performs paid work during school year, but every second during vacations. Overall, this work in nine out of ten cases does not resemble training they do in school⁴⁵. One would presume, this opens up time for learning general and specific subjects – as school homework. The results indicate this is not the case.

Table 7: Study workload after school (in percent)

Preparations on school	VET	Gymnasium
No time at all	24,4	7,4
Up to two hours	41,7	28,5
Up to four hours	20,1	25,9
Up to eight hours	9,5	21,5
Up to twelve hours	2,1	11,0
Up to sixteen hours	1,7	4,7
More than sixteen hours	,3	0,9

Question C4 (7EU VET): All in all, how much time in the average school week do you study outside school (e.g. homework or preparation for school)? Percentage of respondents who chose one of the answers in the table.

One result, from the table x, hard to explain, is that one out of four school VET students in a typical week do not learn for school at all! In addition, two out of five students spent for school learning in the whole week less than two hours. Only approximately one out of ten VET students spend for homework more than 4 hours per week, what makes a clear difference with general education where this proportion is more than 40 percent. Hence, an arising question is how much do VET students enjoy learning at all. Among VET student population only 7 out of 100 claim to enjoy learning, and interestingly, in general education this percent is even lower. We look further into this issue in the remaining part of this section.

From the survey we obtained information what are the main characteristics and drivers for learning: (we draw a comparison to general education). As one could expect, two out of three VET students are mainly driven by interest they have in practical subjects. Interestingly, two out of three VET

⁴⁵ See table x, in appendix x for more detail.

students are not happy with the extent of practical learning⁴⁶. However, only one out of five VET students is interested into general subjects. Every second VET student is driven by understanding the topic. All other motives drives fewer proportion of population. Aproximately, one out of three strive for the highest marks and would like to make a good impression to future employers. Impressing teachers and other pupils is important for even fewer VET student proportion.

Table 8: Characteristics of study behaviour (in percent)

Program characteristics	Percent of VET students	General education
I am interested in practical subjects	58,4	44,6
It is important for me to fully understand what I have to do/learn	49,3	57,4
I strive for the highest possible marks	35,1	41,4
I want to make a good impression on potential employers by achieving good grades	34,9	28,4
I am interested in general subjects (e.g. maths, foreign language)	18,5	24,9
I want to make a good impression on my teachers by achieving good grades	18,2	11,2
I want to keep up with my fellow pupils	15,3	14,0
I enjoy learning	7,2	5,0

Question C2 (7EU VET): To what extent do you agree with the following characteristics that apply to your study behaviour? Responses 4 and 5 on a scale of answers from 1 = "Not at all" to 5 = "Completely".

From the table 8, we can see that learning of VET students is driven slightly differently from general population, although similitias are more striking than differencies. One of them is relatively large interest of general population for practical subjects, expecially given the fact that magnitude of it is very limited. Population in general education is more intrinsingly driven in the way that it is important for them to understand the subject, which means they are more likely to internalise knowledge. Slightly higher proportion of general secondary population strives for high grades and to somewhat smaller extent consider impression future employers as most of them consider continuing schooling. Students in the general populaiton are slightly more interested in general subjects, even though far less as one would expect: only one out of four. Interestingly they are even less driven by intention of impressing teachers and fellow pupils as general population.

In the survey we explored how VET student population evaluate teaching and personal development related characteristics of their program⁴⁷. Even though these aspects are different in kind, the evaluation can be broadly comparable and interpretable. The highest average grades were attributed to the work of career advisors, availability of material, and willigness of teachers to support work. Surprisingly the lowest grade was attributed to exent to which classes are intereseting: one of possible conclusion of this is that even though teachers and school work hard, the overall approaches to learning are still not enough interesting to trigger VET students interest.

⁴⁶ For details see Table x, in the Appendix 1.

⁴⁷ For more detail informaiton see table x in Appendix 1.

Considerations for the development of detailed hypothesis

What are the major implications for further studies? There is clearly a need for a more holistic approach to the different contexts of VET pupils' learning. This relates to the following areas:

- a) There is a need to collect broader knowledge of VET pupils' life after school. Since the time VET students have after school is limited, it is important to identify relations between "good" and "bad" activities, and those that offer the potential for social and professional development. Acquiring deeper knowledge on the role of ICT is certainly one of such issues.
- b) Secondly, it is important to learn how VET students' habits are related to learning in school, and in particular how they contribute to the development of professional expertise.
- c) Linked to this issue is the question of what are the key drivers of learning related to out-of-school activities and what are the interrelationships among them.
- d) The finding on VET students' strong resistance to learning requires serious attention. If in their secondary education VET students develop negative attitudes to learning it is unlikely they will learn well while working.
- e) The learning attitude issue requires us to develop learning typologies. One question is how attitudes to learning impact the time VET is actually taught.
- f) All of the three above dimensions, namely learning behaviour, learning attitudes and leisure time habits should to some extent be a reflection of teaching modes and other programme characteristics.
- g) Lastly, it is important to draw further comparisons of all these aspects with the general population and the population in the labour market. This is in addition to all other intervening variables.

In the next section we will turn attention to the outcomes of learning processes, competencies, school success and overall satisfaction with the current programme.

Competencies, School Success and Satisfaction With the Current Program

One of the major European policy priority in VET is orientation towards learning outcomes, term closely reassembling the competencies – individuals capacities to perform good or bad in certain social context. In simple words, this means that the VET systems shall support individuals' knowledge achievements. Logically, this means that students with higher level of acquired general and specific competencies have also better grades. In this section we will study whether this is the case or not.

However, there are several problematic issues that limit the abovementioned ambitions. First, is the fact that there is rather a vague idea which key competencies are; and far less is known what certain competency labels actually mean, not to mention the debate on relations among competencies, in the way how one presents the context to another, has not in the policy arena even started. Second, there is a problem of an open issue how well can competencies be actually measured with self-assessment approaches. Clearly, there are limitations to this (add source), yet our type of instrument can still be considered to be operational⁴⁸.

⁴⁸ Justification of this will be presented in the final report.

First, we start with the question what is the proportion of VET students with well developed 7 generic competencies, namely team work, ability to learn, communication and networking, independent work, foreign language and performing under pressure⁴⁹. Informatively, we also draw comparison to general education.

Table 9: Assessment of current levels of acquired competencies (in percent)

Assessment of acquired competences	VET	General Education
Being able to work as a team member	68,0	72,4
Being able to quickly familiarize myself with new tasks	58,6	70,2
Being able to approach and engage with others with confidence (e.g. networking)	54,9	57,0
Being able to communicate ideas and suggestions	53,3	56,8
Being able to manage occupational tasks independently	52,5	54,8
Speaking foreign language	47,3	
Being able to perform well under pressure	41,5	46,0

Question E1a (7EU VET): The following question asks for your perception of certain skills and abilities which are listed below. Please assess your current level of these abilities. Responses 4 and 5 on a scale of answers from 1 = "Poor" to 5 = "Excellent".

Table 13 shows that the highest proportion of VET students, two out of three developed well team working skills. This is followed by the learning and communication skills. Approximately every second VET student is assessed to be capable of well managing occupational tasks while the greatest deficit of competencies is related to performing well under pressure. VET students were also asked how well does the school program develop their competencies. Overall, only approximately one out of three students (29,2) considered school program has big overall impact to all before mentioned general competencies.

The result was almost the same in the case of general population (29,8). Related to this, we also preliminarily touched upon the question if the level of acquired competencies is correlated with school success⁵⁰. These preliminary results are presented in the table 10.

Table 10: Correlation between level of acquired competencies and school success

		School success: Rating grades in comparison to other pupils in the class
Being able to manage	Pearson Correlation	,146**

⁴⁹ Elaboration of this selection will be presented in the final version.

⁵⁰ IN the survey school success was measured in a normative way by asking on concrete grades of subjects and an overall grade from the past year, and also in relation to other classmates by asking students to evaluate the level of their school success.

occupational tasks independently	Sig. (2-tailed)	,000
	N	713
Being able to works as a team member	Pearson Correlation	,138**
	Sig. (2-tailed)	,000
	N	713
Being able to quickly familiarize myself with new tasks	Pearson Correlation	,178**
	Sig. (2-tailed)	,000
	N	706
Being able to perform well under pressure	Pearson Correlation	,126**
	Sig. (2-tailed)	,001
	N	710
Being able to communicate ideas and suggestions	Pearson Correlation	,057
	Sig. (2-tailed)	,130
	N	711
Being able to approach and engage with others with confidence (e.g. networking)	Pearson Correlation	,081*
	Sig. (2-tailed)	,030
	N	710

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

As can be seen from the table x, most acquired competencies are positively correlate with the level of school success. Expectedly, the highest connection to school success appears in the case of learning abilities (p.c. is 178), followed by the ability of independent performance of occupational task, team work, performing under pressure. There is very weak link between school success and communication skills. However, in all cases values of pearson correlations are weak, and further analysis will be undertaken.

In this section we also touch an issue related to overall satisfaction with school. This has been surveyed in two ways. First, VET students were asked hypothetical question if they would enroll into the same program again in the event this option would still exist. 28,7 percent of VET student were reluctant to this option⁵¹ in comparison to 42,8 who considered this as very likely scenario – the rest, 28,5 percent encomphase medium value. Second, the student were also asked how they are satisfied with current program. Almost half of the students (approximately 45,2 percent) indicated to be to a large extent and totally satisfied with the current program. Lastly, slightly more than one out of ten students considered to quitting school (13,7), the result which is similar to one in general education (12,1).

Considerations for the development of detailed hypothesis

As indicated in sections 2 and 3 of this paper the analysis has two major directions. The *first* relates to constructing a VET student success indicator and typology that would in a sound way comprehend the dynamics between school success and acquired competencies. However, reference

⁵¹ For detailed results see table in Appendix 1.

points could also be added to this in relation to social background or in combination with future career expectations (see the next section). The second goal is to analyse what determines the school success of VET students. Different combinations will also be considered in relation to satisfaction. In the next section we explore what are the future career aspirations of the studied population.

Future Career Aspirations

In this section we study what are VET students career aspirations towards continuing education and starting work. First we at educational aspirations. Three out indicated to have plans towards continuing with higher professional education and university education, the majority (37,8 percent to the University program)⁵².

VET pupils were also asked what the main drivers for continuing education are. Both two factors were related to expectancy of mastering the professional knowledge⁵³. Higher earnings were incentives for somewhat smaller share of population. Less than one out of three considered further education because of postponation of work, family expectations or experiencing Erasmus program. In relation to world work VET students were asked in which sectors they would like to work, immediatly after VET school or after the study (results are in table 11 below).

Table 11: Preferences towards economic sectors (in percent)

Preferences of towards economic sectors	Percent
Services (e.g. nursing, policing, hairdressing)	36,7
Trade (e.g. banking, financing, business)	25,8
Industry (e.g. producing industry, steel, motor, oil)	19,2
Public administration (e.g. local government, education)	16,7
Agriculture, forestry and fishery	9,8
Non-governmental organisation (e.g. charities, not-for-profit organisations)	7,3

Question D5 (7EU VET): Which sector would you like to work to the most? Percentage of respondents who chose one of the answe in the table.

Given the fact that most VET students see their career in services and trade, we asked them on their future employability perspectives. In spite of economic downturn, the impression when looking at the overall results were rather good⁵⁴. Almost every second VET student believed that his or her program offers a broad perspective for a professional career and ensures employment in the job market. More than forty percent of VET students believed they got very high extent of practical experience for entering the workforce and will perform the job that is important for society⁵⁵. Fewer number is optimistic on their enterpreneurial capacities, reputation and salary if they were to start working immediatly after school. Related to this issue surveyed population was also asked what their incentives was for career development and life in general (see table 12).

Table 12: Professional and life goals (in percent)

⁵² For details see table x in the Appendix 1.

⁵³ For details see table x in the Appendix 1.

⁵⁴ For details see Appendix 1.

⁵⁵ In the survey VET pupils were also asked what is their expected job at the age of 30.

Program characteristics	Percent
Making and maintaining relationships with others (e.g. family and friends)	79,4
Having a good relationship with colleagues	77,9
Having enough spare-time to do other things in life	75,3
Having a job that makes me happy	73,2
Advancing to a high level of status in society	67,6
Having responsibility at work	62,9
Undertaking interesting tasks in the workplace	59,8
Obtaining solid occupational proficiencies	57,2
Having opportunities to learn new things at work	56,8
Gaining job security	52,8
Receiving a high income	51,0

Question D1 (7EU VET): How far do you agree with following statements concerning your professional and life goals? Responses 4 and 5 on a scale of answers from 1 = "Not at all" to 5 = "Completely".

As can be seen from the table x, key incentives for future life are for more students related to private life than in professional development. Approximately three out of four claimed that maintaining relationships with family, friends and enough spare-time are central values in their life. Having job that makes one happy is more important than high income and job security. Interesting work tasks are in between.

Considerations for the development of detailed hypothesis

Probably one of the most challenging issues related to future career aspirations in this section gravitates towards producing an analytical instrument that would reassemble job/skill matching results originating from the VET school perspective. This would show if the expectations of the majority of students regarding their future occupation are in line with the general VET programme orientation. The results might be equally relevant for VET students, schools and programmes. The results would partially contribute to the introductory question of this paper – is the major goal of VET schools more oriented towards producing general competencies and ensuring social inclusiveness, or towards ensuring skilled workers⁵⁶.

In a nutshell, the finding in this section that for most VET students the central feature of their future life gravitates towards good relations already provides a good basis for development of the hypotheses. However, the answer to this is expected to be very complex. Some of the consistency issues involving this are presented in the concluding section.

⁵⁶ There shall be large differences among sectors.



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6. Conclusions

In the first section of the paper we elaborated those conceptual approaches and models for studying VET systems in European countries that supported implementation of the 7EU VET survey. In the second section we provided for the case of Slovenia an initial descriptive overview, focusing on socio-biographic characteristics, the drivers of enrolment in VET, VET students' future career aspirations in relation to work and drivers for learning. We raised the question of whether there is a link between school grades and acquired general competencies. The goal of this analysis was to consider partial analyses within each of these key areas:

- a. socio-biographic characteristics;*
- b. the transition from primary education to VET;*
- c. learning and teaching and the characteristics of VET programmes;*
- d. the congruence between school success, acquired and satisfaction; and*
- e. future career aspirations of the VET population*

as well to detect further relationships among these different areas.

In a nutshell, we foresee the further development of analytical approaches in line with the “social mobility triangle OED⁵⁷” and the related model of the determinants of school success and acquired competencies, both of which were presented in the third section. The models largely integrate those presented concepts that were used in the identification of the survey variables such as, for example, *geographical mobility and ethnicity, the skill matching problem, human capital theories, the decision-making process and factors of occupational choice, motivation theories, social and information-process learning approaches and knowledge management models*. The model can already describe parts of the story on the current and future VET situation in Slovenia (and presumably also in the other six surveyed countries).

The findings in this paper indicate that VET developers (at least in Slovenia) will need to master the handling of certain paradoxes. This is no surprise since some of the key theoretical approaches in the area such as the human capital theory, the sociology of professional groups or career theories already developed contradictory approaches in the past, and the current era of an economic downturn has brought them to the surface. The biggest contradictory points of concern are:

Less relevant determinants to VET school enrolments matter more than less relevant ones We found an indication that enrolment determinants of VET programmes are multidimensional. They vary in terms of the richness and relevance of information, the time span in which they affect a pupil, and also the extent that pupils are aware of their impact. The overall impression is that relevant external information sources linked to employability aspects come second to VET students' own beliefs.

VET students do not like learning at school but they do like to be in education

In the analysis we found proof that VET students largely do not learn throughout the school year, which is clearly different from the population in general education. We pose the question of which segments of general satisfaction in fact correlate with VET school satisfaction. Is there any chance to build motivation upon those aspects? We still need to explore if those who like learning really do

⁵⁷ ... Origin, Education and Destination see Section 3.

learn more? Which are the schools' main incentives to stimulate learning? What are the still unexplored capacities of the relevance of paid work during vacations?

VET students appreciate the effort of teachers and like school capacities in general but give the impression that they do not get much from VET education

The finding that only one out of three students believe that the school contributes to the development of general competencies to a large extent was quite surprising. Despite this, we found an indication that a higher level of school success is to some extent related to a higher level of acquired competencies. The pattern between VET students and those in general education is not much different.

VET students believe they are well prepared to start work but they do not want to start yet

Three out of four students do not want to start work after school. Even though there is a very high extent of a professional spirit towards their professional life⁵⁸ we found an indication that their private life is much more important to them. It seems they go well along with the parents' hard work: one out of four parents (father and mother) has flexible work arrangements, and three out of ten work additionally in order to create extra income. Their primary habitat is the one they have created with their peers.

Competitiveness versus social inclusion

At this stage we leave some questions open. They gravitate towards the principal questions of this paper and relate to the future development of VET systems:

- a) should VET curricula develop towards more field-specific skills or general competencies;
- b) should VET programmes be synchronised or diversified;
- c) should the supporters of future development come from private (employers), professional or administrative domains. Hence, in the future will job-specific training move out of schools and increasingly become a burden on the individual?

Further analytical work faces three main challenges. *The first* is to look at these issues in a comparative fashion related to the socio-biographic characteristics, type of VET programme and across the seven surveyed countries. During this stage all the sub-hypotheses will be elaborated. *The second* relates to further development of the analytical models, composed variables and typologies. The third will gravitate towards the development of properly segmented national and international policy recommendations.

⁵⁸ Together with HEGESCO data parallels can be drawn with general education.

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Appendix 1: Detailed presentation of descriptive analysis.

Table 1: Gender (in percent)

Gender	Percent
Male	55,6
Female	44,4

Question G1 (7EU VET): Are you male or female? Responses "Male" or "Female".

Table 2: Age (in percent)

Age	Percent
17	49,5
18	40,0
19 and more	8,8

Question G2(7EU VET): How old are you? Respondents wrote a number.

Table 3: Place of residence (in percent)

Place of residence	Percent
In a House / apartment/ flat with parent(s) or guardian(s)	70,9
In own apartment / house/ flat	20,4
In a shared house / apartment / flat (with friends or other pupils)	1,9
In a pupil dormitory	6,9

Question G4 (7EU VET): Where do you live (most of the time)? Percentage of respondents who chose one of the answers in the table.

Table 4: Brothers/sisters (in percent)

Brothers/sisters	Percent
0	9,0
1	52,4
2	22,4
3 or more	16,3

Question G5 (7EU VET): How many brothers and sisters do you have? (including step/half-brothers and -sisters). Respondents wrote a number.

Table 5: Area of living (in percent)

Area of living	Percent
A big city	14,4
The suburbs of a big city	10,1
A town or a small city	24,3
A country village	41,8
A farm or home in the countryside	9,4

Question G7 (7EU VET): Which phrase below best describes the area where you live? Percentage of respondents who chose one of the answers in the table.

Table 6: Type of school (in percent)

Type of school	Percent
Vocational upper secondary school (3 years)	31,6
Technical upper secondary school (4 years)	67,6
Gymnasium	0,8

Question B1 (7EU VET): What type of school/programme are you enrolled in? Percentage of respondents who chose one of the answers in the table.

Table 7: Importance of key factors that determine enrolment into program (average)

Determinants of enrolment into VET program	Mean	St. Dev.
Former teachers encouraged me to enrol on this programme	1,52	,913
My friends have chosen to undertake the same programme	1,91	1,106
My parents suggested I enrol on this programme	2,03	1,117
My previous examination grades prevented me being able to enrol on more preferable programmes	1,57	1,008
The occupation(s) related to the programme appealed to me	3,56	1,167
The programme offered good job prospects	3,29	1,092
The programme provides a good foundation for further qualifications /education	3,51	1,038
The reputation of the programme was attractive to me	2,59	1,146
This programme was the most appropriate within a reasonable distance from my home	2,14	1,347

Question A4 (7EU VET): How important were the following aspects to you when you were choosing your current programme? Average value of responses from a scale 1 = "Not at all" to 5 = "Very".

Table 8: Importance of information sources when VET pupils choose programme

Key information sources	Mean	St. Dev.
An aptitude test offered by an educational establishment (e.g. school, college)	1,91	1,068
Friends or classmates	2,20	1,131
Informative days / fair / open days at schools	2,97	1,281
Job centre	1,62	,966
On-line Information and/or other public media (e.g. newspapers)	2,31	1,236
Parents or family members	2,65	1,127
School counsellors or career advisors	1,99	1,140
Teachers	1,90	1,076

Question A5 (7EU VET): How important were the following information sources when you were choosing your current programme? Average value of responses from a scale 1 = "Not at all" to 5 = "Very".

Table 9: Considering an alternative programme when selecting the current one (in percent)

Alternatives to current program	Percentage of VET students
No, I didn't considered any alternative programme	23,2
I was considering one other alternative programme	51,7
I was considering two other alternative programmes	21,2
I was considering among three other alternative programmes	2,0
I was considering more than three alternative programmes	1,9

Question A6 (7EU VET): Have you considered any alternative programme when you were selecting your current one? Percentage of respondents who chose one of the answers in the table.

Table 10: Considering certain career aspects of study programme as highly relevant (in percent)

Key information sources	Percentage of VET students
Enables me to receive a good starting salary/wage when successfully completed	32,1
Ensures employment in the job market	47,4
Is recognised within society as having a good reputation	31,8
Offers me a broad perspective for a professional career	47,5
Prepares me for a job that is important for society	42,7
Prepares me for starting my own business or becoming self-employed	33,0
Prepares me well for further education and training	44,4
Provides useful practical experience for entering the workforce	44,3

Question B4 (7EU VET): Now that you know your programme well, to what extent you agree with the following statements? Responses 4 and 5 on a scale of answers from 1 = "Not at all" to 5 = "Completely".

Table 11: Assessing certain characteristics of school programme as good (in percent)

Program characteristics	Percentage of VET students
All in all I am satisfied with the programme	45,2
Counsellors/careers advisors are usually helpful	48,8
Information on careers and training is easily accessible at school	34,6
Most of my classes are interesting	22,4
Most of my teachers are usually interested in helping me learn	38,6
Most of my teachers are usually well prepared when teaching their subjects	35,2
My school offers enough learning and training material	44,2
School facilities are well maintained	33,3
The computers at school are up to date	38,3
The number of computers available at school is adequate for the needs of pupils	35,4

Question B5 (7EU VET): This question is about your satisfaction with your school. Please indicate to what extent you agree with the following statements? Responses 4 and 5 on a scale of answers from 1 = "Not at all" to 5 = "Completely".

Table 12: Enrolling into the same program again (in percent)

Enrolling into same program again	Percent
Definitely not	13,7
Rather not	15,0
Maybe	28,5
Most likely	24,9
Definitely	17,9

Question B7 (7EU VET): Looking back, if you were to choose again would you choose the same programme? Percentage of respondents who chose one of the answers in the table.

Table 13: Characteristics of study behaviour (in percent)

Program characteristics	Percent of VET students	Percent of Gymnasium (or general education?) students
I am interested in general subjects (e.g. maths, foreign language)	18,5	24,9
I am interested in practical subjects	58,4	44,6
I enjoy learning	7,2	5,0
I strive for the highest possible marks	35,1	41,4
I want to keep up with my fellow pupils	15,3	14,0
I want to make a good impression on my teachers by achieving good grades	18,2	11,2
I want to make a good impression on potential employers by achieving good grades	34,9	28,4
It is important for me to fully understand what I have to do/learn	49,3	57,4

Question C2 (7EU VET): To what extent do you agree with the following characteristics that apply to your study behaviour? Responses 4 and 5 on a scale of answers from 1 = "Not at all" to 5 = "Completely".

Table 14: Conducting paid work after school (in percent)

Preparations on school	Percent
Regularly	12,6
Regularly, but only during vacations	52,3
No	35,0

Question C6a (7EU VET): The following questions are about paid work that is not part of your programme. Have you worked for payment during the last year outside your programme (e.g. work that is not part of the completion of the programme). Percentage of respondents who chose one of the answers in the table.

Table 15: Similarity of work tasks to those undertaken in school programme (in percent)

Preparations on school	Percent
Yes, most of them	12,4
Few of them	35,4
No	52,2

Question C6c (7EU VET): Are the tasks of this work similar to those you undertake during your programme? Percentage of respondents who chose one of the answers in the table.

Table 16: Professional and life goals (in percent)

Program characteristics	Percent
Making and maintaining relationships with others (e.g. family and friends)	79,4
Having a good relationship with colleagues	77,9
Having enough spare-time to do other things in life	75,3
Having a job that makes me happy	73,2
Advancing to a high level of status in society	67,6
Having responsibility at work	62,9
Undertaking interesting tasks in the workplace	59,8
Obtaining solid occupational proficiencies	57,2
Having opportunities to learn new things at work	56,8
Gaining job security	52,8
Receiving a high income	51,0

Question D1 (7EU VET): How far do you agree with following statements concerning your professional and life goals? Responses 4 and 5 on a scale of answers from 1 = "Not at all" to 5 = "Completely".

Table 17: Reasons for continuing education (in percent)

Reasons for continuing education	Percent
To become an expert in my field	64,2
Follow my professional interest	61,0
Earn a high income later on in life	60,7
Enhance my career options	56,5
Take on a leadership role later on in life	53,6
Postpone starting full-time work	34,7
Fulfil my parent's expectations	34,6
Experience a pupil exchange programme	25,9

Question D8 (7EU VET): This is about your opinion regarding further education (e.g. advanced training or studying). How far do you agree with the statements below about undertaking further education (or participate in further training)? Responses 4 and 5 on a scale of answers from 1 = "Not at all" to 5 = "Completely".

Table 18: Fathers' education (in percent)

Reasons for continuing education	Percent
<ISCED level 5A/6>	7,6
<ISCED level 5B>	8,6
<ISCED level 4>	8,5
<ISCED level 3B, 3C>	56,8
<ISCED level 3A>	3,5
<ISCED level 2>	8,9
<ISCED level 1> or without school leaving certificate	1,2

Question G8 (7EU VET): What is the 'highest level of schooling' completed by your father / mother?
Percentage of respondents who chose one of the answers in the table.

Table 19: Parents' employment status with education ISCO 3 (in percent)

Employment type	Mother	Father
Full-time, on a regular basis or self-employed (30 hours or more per week)	73,8	69,4
Part-time, on a regular basis or self-employed (less than 30 hours per week)	6,9	9,8
Working temporarily	2,1	2,8
Not employed, searching for a job	3,7	4,1
Not employed, not searching for a job (e.g. Housewife / Houseman, Retiree)	7,0	9,0

Question G9 (7EU VET): What is the employment status of your father/mother? Percentage of respondents who chose one of the answers in the table.

Table 20: Possession of following items at home (in percent)

Possession of items	Percent
A computer you can use for school work	96,7
A link to the Internet	95,6
A DVD or VCR player	91,0
Books to help with your school work (e.g. dictionary, atlas)	89,0
A room of your own	88,6
Educational software	66,8
Classic literature	58,5

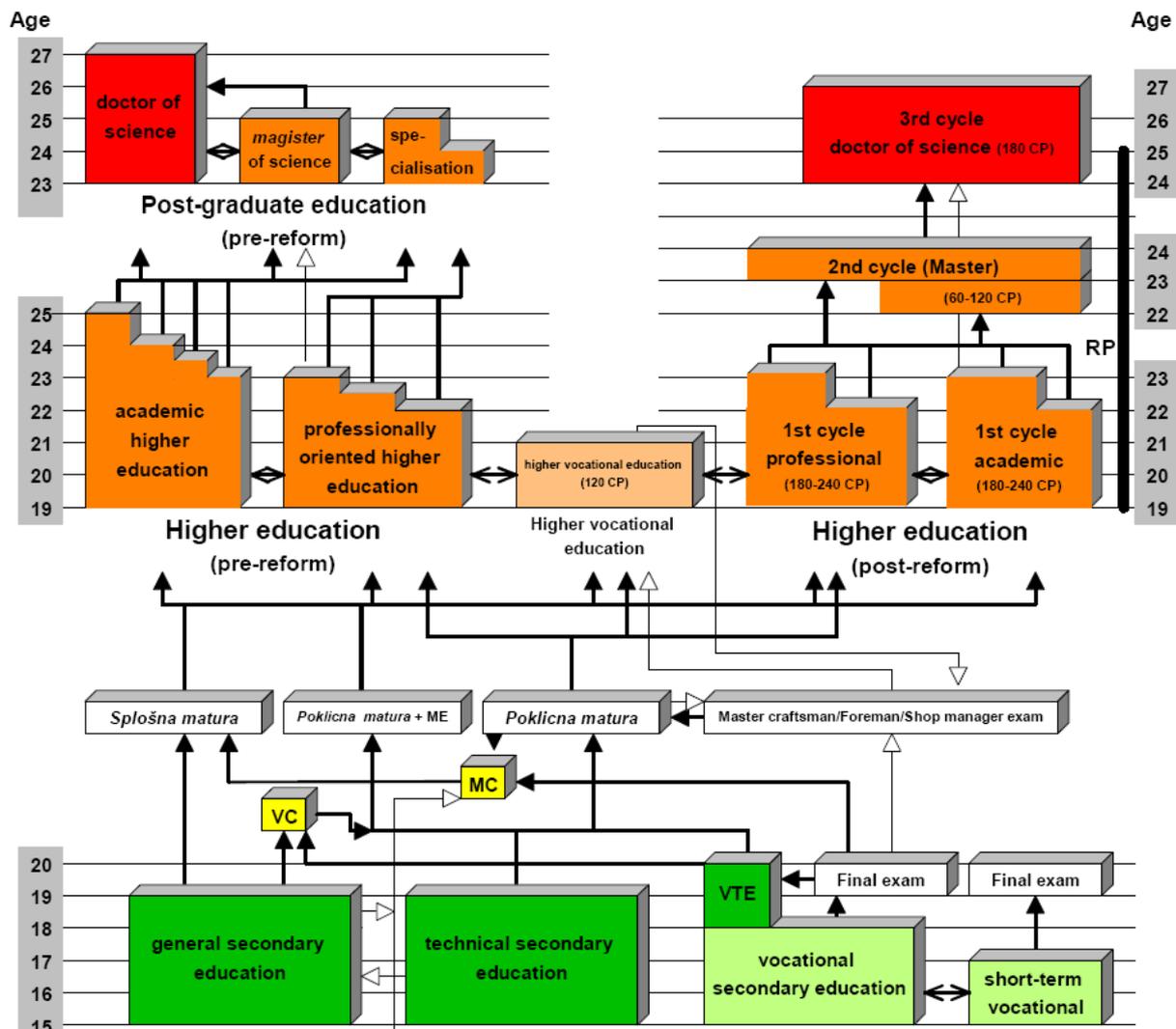
Question G11 (7EU VET): Which of the following are in your home? Responses "yes".

Table 21: Experiencing family income (in percent)

Reasons for continuing education	Percent
Living comfortably on present income	56,5
Coping on present income	29,8
Finding it difficult on present income	6,4
Finding it very difficult on present income	2,3

Question G14 (7EU VET): Which of the description below comes closest to how you feel about your family's income? Percentage of respondents who chose one of the answers in the table.

Appendix 2: The Structure of the Education System from primary school onwards in Slovenia 2006/07.



Source: Ministry of Education and Sport (2008-), Internet: http://www.mss.gov.si/fileadmin/mss.gov.si/pageuploads/ministrstvo/pdf/shema_en_2007.pdf